Finding of No Historic Properties Affected
for the
Issuance of Commercial and Research Leases
within the Gulf of Mexico Wind Energy Areas J, K, L, and N
and
Issuance of Right-of-Way and/or Right-of-Use and Easement Grants
on the Outer Continental Shelf Offshore Texas and/or Louisiana

Finding

The Bureau of Ocean Energy Management (BOEM) has made a Finding of No Historic Properties Affected (Finding) for this undertaking, pursuant to Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and 36 CFR § 800.4(d)(l) of the Section 106 regulations, "Protection of Historic Places." Consistent with this Finding, BOEM will ensure the inclusion of lease and grant stipulations requiring lessees/grantees to avoid any potential historic properties identified through their high-resolution geophysical surveys during bottom-disturbing activities associated with site characterization activities.

Documentation in Support of the Finding

I. Description of the Undertaking

Summary

This document describes BOEM's compliance with Section 106 of the NHPA and documents the agency's Finding for the undertaking, including the issuing of commercial and research leases within four Gulf of Mexico Wind Energy Areas (WEAs), designated as WEAs J, K, L, and N, and granting rights-of-way (ROWs) and rights-of-use and easement (RUEs) in the region. WEA "I" will also be included in this lease sale but was included under a previous Section 106 consultation and, thus, is not considered. BOEM prepared this documentation in support of the Finding following the standards outlined in 36 CFR § 800.11(d) (Documentation Standards). BOEM provided this Finding and supporting documentation to the entities that agreed to be consulting parties for the undertaking for comment (see the *Consultation with Appropriate Parties and the Public* section below).

Federal Involvement

The Energy Policy Act of 2005, Pub. L. No. 109-58, added Section 8(p)(l)(C) to the Outer Continental Shelf Lands Act (OCSLA). This new section authorized the Secretary of the Interior to issue leases, easements, or ROWs on the Outer Continental Shelf (OCS) for the purpose of renewable energy development, including wind energy development (see 43 U.S.C. § 1337(p)(l)(C)). The Secretary delegated this authority to the former Minerals Management Service and then to BOEM. Final regulations implementing the authority for renewable energy leasing under the OCSLA (30 CFR part 585) were promulgated on April 22, 2009.

On October 27, 2023, BOEM announced that it completed the area identification process to delineate the WEAs pursuant to 30 CFR § 585.211(b) for this lease sale (Appendix A). BOEM has determined that issuing commercial or research leases within the WEAs offshore Texas and Louisiana and granting ROWs and RUEs within the region constitutes an undertaking subject to

Section 106 of the NHPA and that the subsequent site characterization activities constitute activities that have the potential to cause effects on historic properties.

Description of the Wind Energy Areas

The Gulf of Mexico WEAs considered in this undertaking consist of four areas along the coasts of Texas and Louisiana designated as Area J, Area K, Area L and Area N, respectively (**Error! Reference source not found.**). Table 1 describes the number of whole or partial OCS blocks, approximate distance to shore, and area of each WEA.

Table 1. Description of the Gulf of Mexico Wind Energy Areas.

Wind Energy Area	Number of OCS Blocks	Acres	Closest Distance to Texas (km)*	Closest Distance to Louisiana (km)*
Area J	119	495,567	76	N/A
Area K	37	119,635	98.9	133.3
Area L	30	91,157	85.2	N/A
Area N	24	56,978	n/a	132.5

* Based on a GIS analysis conducted for this Finding to determine the approximate shortest distance between the WEA and the shoreline. These distances may differ from other publicly available BOEM documents that alternatively provide the distances between the WEAs and closest port city.

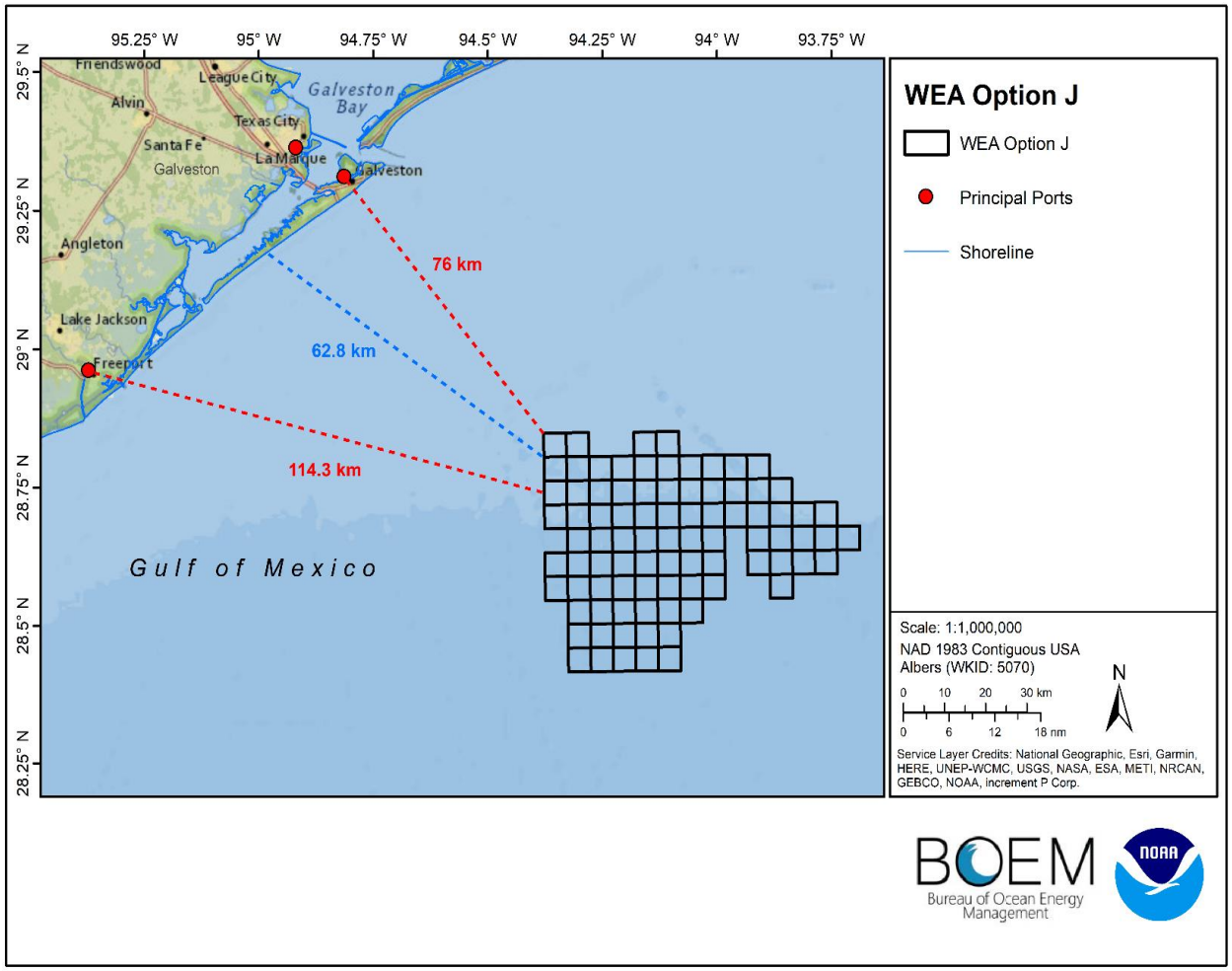

Figure 1. Wind Energy Area Option J.

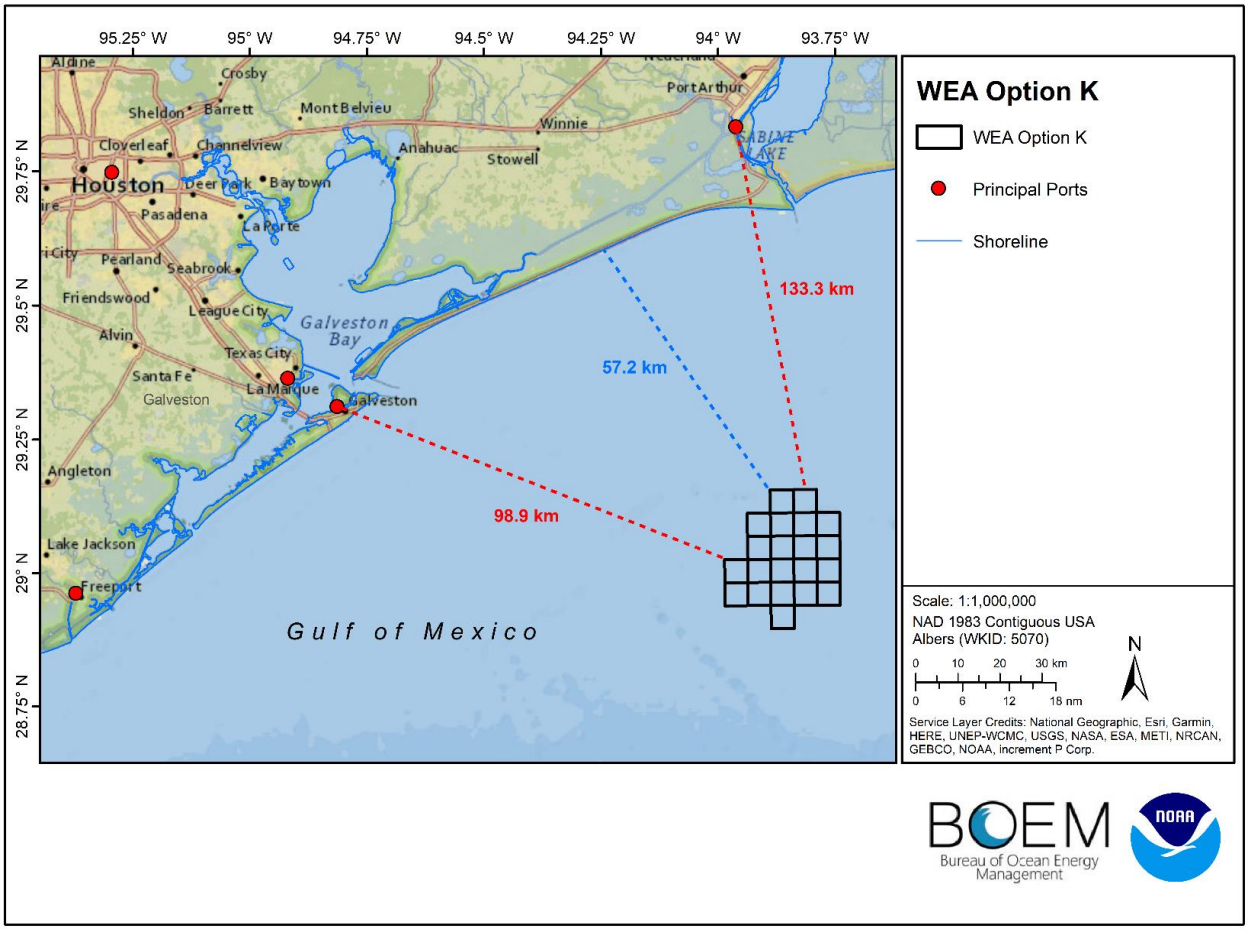

Figure 2. Wind Energy Area Option K.

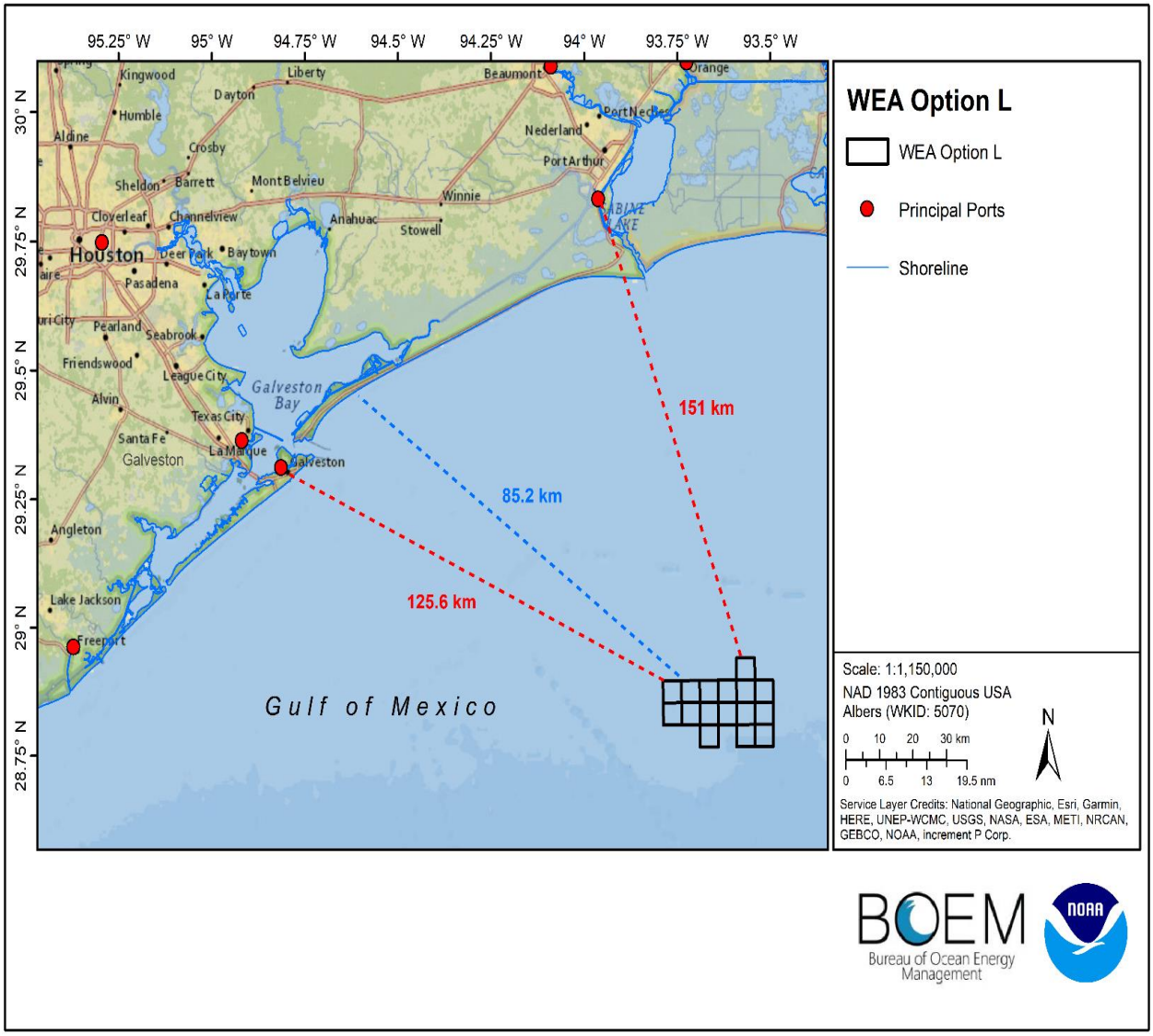

Figure 3. Wind Energy Area Option L.

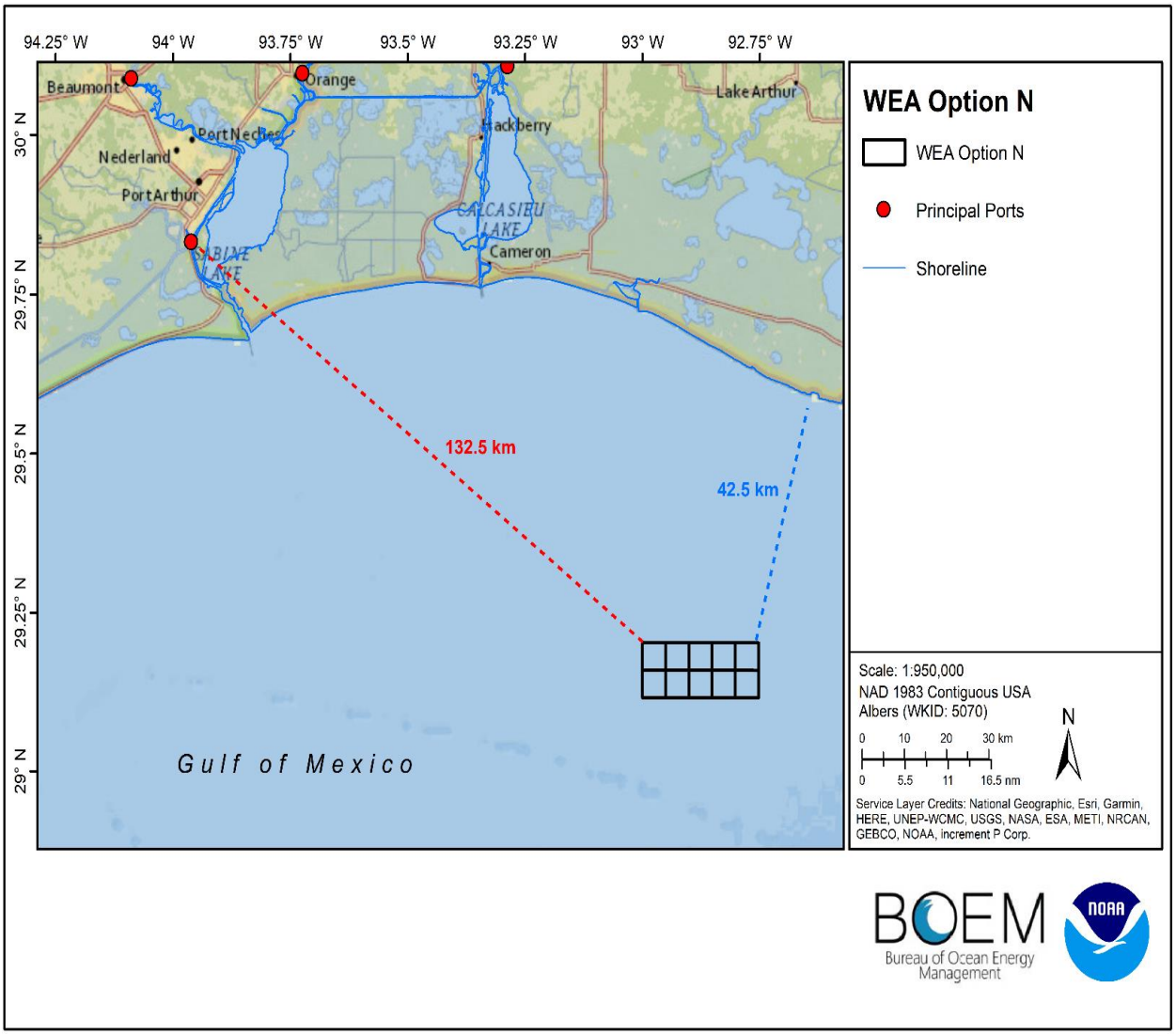

Figure 4. Wind Energy Area Option N.

Undertaking

The undertaking includes the proposed issuance of commercial or research leases within the WEAs and granting of ROWs and RUEs in the region and considers the execution of associated site characterization activities on these leases or grants. A lessee must submit the results of site characterization surveys with their plans (e.g., 30 CFR § 585.610, § 585.626, and § 585.645). Although BOEM does not issue permits or approvals for these site characterization activities, it will not approve a lessee's plan if the required survey information is not included. BOEM's guidance on cultural resource surveys as it relates to renewables can be found on BOEM's website: https://www.boem.gov/sites/default/files/documents/about-boem/Archaeology%20and%20Historic%20Property%20Guidelines.pdf.

Site characterization activities include both high-resolution geophysical (HRG) surveys, which do not involve seafloor-disturbing activities, and geotechnical investigations, which may include seafloor-disturbing activities. Should survey equipment be accidentally lost, retrieval of lost equipment may also occur, as necessary. The purpose of the HRG survey is to acquire shallow

hazards data, identify potential archaeological resources, characterize seafloor conditions, and conduct bathymetric charting. BOEM anticipates that HRG surveys would be conducted using the following equipment: swath bathymetry system; magnetometer/gradiometer; side-scan sonar; and shallow and medium (seismic) sub-bottom profiler systems. This equipment is typically towed from a moving survey vessel that does not require anchoring and is not expected to contact the seafloor. BOEM does not consider an HRG survey to be an activity that has the potential to cause effects on historic properties, and this activity is not considered further in this Finding.

Geotechnical testing or sampling involves seafloor-disturbing activities and, therefore, has the potential to cause effects on historic properties. Geotechnical testing is conducted to assess the suitability of sediments to support a structure or transmission cable under any operational and environmental conditions that might be encountered (including extreme events) and to document soil characteristics necessary for the design and installation of all proposed structures and/or cables. Geotechnical investigation may include the use of equipment such as gravity cores, piston cores, vibracores, deep borings, and Cone Penetration Tests, among others. Some of these methods may additionally require the use of anchored vessels, multi-point anchored barges, or jack-up barges.

BOEM also anticipates cases where geotechnical testing methods may be employed as part of the identification of historic properties. In some instances, direct sampling may be the only available method of testing the presence or absence of horizons of archaeological potential within features of interest identified during geophysical survey.

The undertaking does not, however, include cable installation or connection to shore-based facilities, installation of site assessment equipment (e.g., meteorological buoys), or construction or operation of commercial-scale wind energy facilities. Should a lessee propose to deploy site assessment equipment within the Gulf of Mexico WEAs, they would submit a Site Assessment Plan (SAP) to BOEM, which BOEM would consider under a separate Section 106 review. Should a lessee propose to construct and operate a commercial-scale wind energy facility within the Gulf of Mexico WEAs, they would submit a Construction and Operations Plan (COP) to BOEM, which BOEM would consider under a separate Section 106 review. Should a developer propose installation of a regional backbone transmission system, they would submit a General Activity Plan (GAP) to BOEM, which BOEM would consider under a separate Section 106 review.

Area of Potential Effects

As defined in the Section 106 regulations (36 CFR § 800.16(d)), the Area of Potential Effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The dimensions of the APE are influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. The APE for this undertaking includes the WEAs identified above (Figures 1-4) and potential cable corridors to shore as described below.

The APE for this undertaking is defined as the depth and breadth of the seabed that could potentially be affected by seafloor/ground-disturbing activities associated with site characterization activities. The APE for site characterization activities includes the discrete horizontal and vertical areas of the seafloor that may be impacted through geotechnical sampling, which may include the collection of core samples, soil borings, or other bottom-disturbing

techniques that could directly affect historic properties on or below the seafloor, if present. In addition, geotechnical sampling may also require the use of barges or anchored vessels that could also directly affect historic properties, if present.

Site characterization activities could occur within the extent of the Gulf of Mexico WEAs and along corridors that extend from the WEAs to the onshore energy grid, and additionally within the extent of regional backbone transmission systems that may be proposed. It is anticipated that these ROW/RUE routes would consist of a minimum 300-meter-wide (984-foot-wide) corridor centered on any anticipated cable locations. Because no ROW or RUE grants have been issued, BOEM is uncertain of the exact location of these cable corridor surveys. However, BOEM can anticipate their geographic extent. Power generated from potential Gulf of Mexico lease areas would need to be transmitted to shore, either directly from the lease areas by individual export cables to onshore cable landings and/or to offshore regional "backbone" transmission system(s). Because power may be purchased from nearby states, these potential export cables and regional transmission system(s) are anticipated to be offshore Texas and Louisiana. Therefore, for the purposes of this undertaking, BOEM estimates that the APE associated with cable site characterization activities would occur within discrete corridors located within the region between shore and the Gulf of Mexico WEAs.

Based on the distance from shore and the minor scale and temporary manner in which site characterization studies will likely occur, BOEM has concluded that the equipment and vessels performing these activities will be indistinguishable from existing lighted vessel traffic from an observer onshore. Therefore, BOEM has not defined as part of the APE onshore areas from which the site characterization activities would be visible. In addition, there is no indication that the issuance of a lease or grant of a RUE or ROW and subsequent site characterization will involve expansion of existing port infrastructure. Therefore, onshore staging activities are not considered as part of the APE for this specific undertaking.

Consultation with Appropriate Parties and the Public

On October 27, 2023, BOEM published a Final Area Identification Memorandum for the commercial wind energy leasing on the OCS in the Gulf of Mexico (Appendix A). Previously, BOEM had issued a Call for Information and Nominations on November 1, 2021. BOEM has engaged with stakeholders through public meetings and the Gulf of Mexico Intergovernmental Renewable Energy Task Force (Task Force) throughout the renewable energy leasing process, including holding Task Force meetings on June 15, 2021; February 2, 2022; July 27, 2022; and August 2, 2023 to facilitate coordination and consultation among Federal, State, local, and tribal governments regarding offshore wind energy and the renewable energy leasing process on the OCS in the Gulf of Mexico. To date, one lease sale was held in the Gulf of Mexico and handled under a previous Section 106 consultation effort. This lease sale resulted in one lease area receiving a high bid.

BOEM prepared an environmental assessment (EA) to consider potential environmental consequences of site characterization activities (i.e., biological, archaeological, geological, and geophysical surveys and core samples) and site assessment activities (i.e., installation of meteorological buoys) associated with issuing wind energy leases in the Gulf of Mexico Call Area, which included the WEAs identified for this lease sale (BOEM 2022). As described above, only site characterization activities are considered in this undertaking; site assessment activities, should they be proposed by a lessee, would be subject to a separate Section 106 review. The EA also

considered project easements associated with each potential lease issued and grants for subsea cable corridors in the Gulf of Mexico. BOEM held a public review and comment period for the EA, which closed on September 2, 2022. No comments were received that indicate historic properties would be affected by this undertaking or otherwise change this determination.

BOEM initiated Section 106 consultation for the undertaking of issuing a commercial lease and the issuance of ROW/RUE grants within the Gulf of Mexico Call Area by sending a letter to the multiple parties listed below on December 21, 2023 (Appendix B). BOEM sent this letter to the Texas State Historic Preservation Office (SHPO), Louisiana SHPO, and Advisory Council on Historic Preservation (ACHP). BOEM also sent this letter to the following federally recognized tribes: Absentee-Shawnee Tribe of Indians of Oklahoma; Alabama-Coushatta Tribe of Texas; Alabama-Quassarte Tribal Town; Apache Tribe of Oklahoma; Caddo Nation of Oklahoma; Cheyenne and Arapaho Tribes of Oklahoma; Chitimacha Tribe of Louisiana; Choctaw Nation of Oklahoma; Comanche Nation of Oklahoma; Coushatta Tribe of Louisiana; Eastern Shawnee Tribe of Oklahoma; Jena Band of Choctaw Indians; Kiowa Indian Tribe of Oklahoma; Mescalero Apache Tribe; Miccosukee Tribe of Indians of Florida; Mississippi Band of Choctaw Indians; Muscogee (Creek) Nation; Poarch Band of Creek Indians; Seminole Nation of Oklahoma; Seminole Tribe of Florida; Shawnee Tribe; Southern Ute Indian Tribe; Thlopthlocco Tribal Town; Tonkawa Tribe; and Tunica-Biloxi Tribe of Louisiana.

The list of other consulting parties for the undertaking was developed and included certified local governments, historical preservation societies, museums, and State-recognized tribes. A letter was sent on February 1, 2024, to 42 individuals on the list of potential Section 106 consulting parties informing them about the undertaking and inviting them to be an NHPA Section 106 consulting party (Appendix B). These letters, in part, solicited comment and input regarding the identification of, and potential effects on, historic properties from leasing and site assessment activities for the purpose of obtaining input from federally recognized Tribes, SHPOs, the ACHP, and consulting parties for the Section 106 review (36 CFR § 800.2(d)(3)) and to determine the federally recognized Tribes' and consulting parties' interest in participating as a consulting party. BOEM received requests to become consulting parties from seven entities: Texas Maritime Museum; Padre Island National Seashore; Terrebonne Parrish; Aransas County Historical Society; Choctaw Nation of Oklahoma; Seminole Tribe of Florida; Texas Historical Commission; and Louisiana Division of Archaeology. The Jean Lafitte National Historical Park and Preserve responded and stated this undertaking was outside of their area of interest. Consultation invitation letters are included in Appendix C.

A draft version of this finding was transmitted to consulting parties on March 29, 2024 for review and comment (Appendix C). The Louisiana and Texas State Historic Preservation Offices and Texas Maritime Museum responded and concurred that no historic properties would be affected. Texas requested future consultation on potential impacts to above-ground/built resources that may be caused by cable routes, the installation of site assessment equipment, and/or the construction and operation of any wind facilities. No other responses or comments were received on the draft Finding. Comments that were received are included in Appendix D.

II. Description of the Steps Taken to Identify Historic Properties

Pursuant to 36 CFR § 800.4(a)(2), BOEM has reviewed existing and available information regarding historic properties that may be present within the APE, including any data concerning possible historic properties not yet identified. Sources of this information include consultation

with the appropriate parties, including the Texas and Louisiana SHPOs, and information gathered through BOEM-funded studies.

Relevant BOEM studies include a review of reported shipwrecks in BOEM's Gulf of Mexico Archaeological Resource Database (BOEM 2024). BOEM's Archaeological Resource Database does not represent a complete listing of all potential shipwrecks on the Gulf of Mexico OCS but rather serves as a baseline source of existing and available information for the purposes of corroborating and supporting identification efforts.

To date, the Gulf of Mexico WEAs have not been subjected to a complete and comprehensive archaeological identification survey; however, the types of historic properties expected to be present within the APE include both submerged precontact and historic-period archaeological sites.

Precontact Historic Properties

During the Late Pleistocene, at the Last Glacial Maximum (20,000 years before present [B.P.]), the glaciers that covered vast portions of the Earth's surface sequestered massive amounts of water as ice and lowered global sea level approximately 394 feet (ft) (120 meters [m]). Available evidence suggests that sea level in the northern Gulf of Mexico was at least 90 m (295 ft) and possibly as much as 130 m (427 ft) lower than present sea level during the period 20,000-17,000 years B.P. (Nelson and Bray 1970). Sea level in the northern Gulf of Mexico reached its present stand around 3,500 years B.P. (Pearson et al. 1986). During periods that the continental shelf was exposed above sea level, the area was open to human habitation.

Until the late 20th century, it was generally accepted by archaeologists that the earliest humans in North America were the so-called Clovis peoples, named for a lanceolate-shaped, fluted projectile point first found near Clovis, New Mexico. The Clovis culture was thought to have entered the continent around 13,500 years B.P. by way of Beringia, a landmass connecting Asia to North America exposed during the Last Glacial Maximum (LGM) and along an ice-free corridor opened between the Cordilleran and Laurentide ice sheets. Today, however, a growing body of evidence has dispelled the "Clovis First" model with the discovery of several sites with accurate pre-Clovis dates in the eastern United States (Goodyear 2005), Chile (Dillehay 1989; Meltzer et al. 1997), and central Texas (Waters et al. 2011). The Buttermilk Creek Complex identified by Waters et al. (2011) at the Debra L. Friedkin Site (41BL1239) is the nearest to the Gulf of Mexico WEA region and is dated from ~13,200 to 15,000 years B.P.

Establishing a reliable date for the entrance of Native Americans into the coastal regions of the Gulf of Mexico is complicated by the fact that archaeological deposits pre-dating 5,500 B.P lie buried under as much as 40 m (131 ft) of Holocene sediments or are underwater on the OCS (Rees 2010). Conclusive evidence for precontact sites on the OCS is sparse. McFaddin Beach Site (41JF50) in Jefferson County, Texas, has produced hundreds of artifacts 8,000 years old or older that have been redeposited from an unknown site or sites eroding from the now-submerged Pleistocene shoreline. Forty-three percent of the total sample includes artifacts diagnostic of the Middle and Late Paleoindian periods and include Clovis, Dalton, Scottsbluff, and San Patrice projectile points (Stright et al. 1999).

Recent archaeological research in Florida has confirmed that pre-Clovis peoples inhabited the southeastern region of North America more than 14,500 years ago (Halligan et al. 2016). The

sea-level curve for the northern Gulf of Mexico proposed by Coastal Environments, Inc. (CEI) (1977a; 1977b) and Gagliano et al. (1982) suggests that sea level at 12,000 years B.P. would have been approximately 45-60 m (148-197 ft) below the present-day sea level. On this basis, the continental shelf shoreward of the 45- to 60-m (148- to 197-ft) bathymetric contours has potential for precontact sites dating after 12,000 years B.P. The Gulf of Mexico WEAs are within this range and have a maximum depth of approximately 45 m (148 ft).

Distinct precontact archaeological sites on the OCS are difficult to identify in wide-area, remote-sensing surveys due to their small footprint and material composition (e.g., stone, shell, wood, ceramics, etc.). Instead, archaeologists and geophysicists attempt to identify intact landforms that survived the erosional processes associated with sea-level rise and, therefore, may also contain intact archaeological materials. Based on their 1977 baseline study, CEI (1977a; 1977b) proposed that paleo-landforms analogous to the types of environments frequented by Paleoindians can be identified on the now-submerged shelf. Geomorphic features that have a high potential for associated archaeological sites include barrier islands and back-barrier embayments, river channels and associated floodplains and terraces, and salt-dome features. Investigations in Louisiana and Florida indicate that the mound-building activity by precontact inhabitants may have occurred as early as 6,200 years B.P. (Gibson 1994; Gibson and Shenkel 1988; Russo 1992; 1994; Saunders and Allen 1994; Saunders et al. 2005). Therefore, human-made features, such as earthen mounds, may also exist in the shallow inundated portions of the OCS.

Regional geological mapping studies by BOEM allow interpretations of specific geomorphic features and assessments of archaeological potential in terms of age, type of system the geomorphic features belong to, and geologic processes that formed and modified them. In general, sites protected by sediment overburden have a high potential for preservation from the destructive effects of marine transgression. The same holds for sites submerged in areas subjected to low wave energy and for sites on relatively steep shelves, which were inundated during periods of rapid rise in sea level. Although a few specific areas in the Gulf of Mexico believed to have the potential for precontact site preservation have been identified through the oil and gas industry's archaeological and geohazard surveys, the operators generally have chosen to avoid these areas rather than conduct further investigations. Thus, the validity of the hypothesis that the landforms identified in industry surveys may contain archaeological sites remains speculative until comprehensive investigation is conducted.

Along the coast, archaeologists have documented precontact sites representing the period between the Paleoindian culture (circa 15,000 to 10,000 B.P.) and European contact (circa 16th century). The McFaddin Beach Site (41JF50), east of Galveston in the McFaddin National Wildlife Refuge, has produced late Pleistocene megafauna remains and lithics from all archaeological periods, including a large percentage of Paleoindian artifacts (Stright et al. 1999). A study funded by the Minerals Management Service to locate precontact archaeological sites in association with the buried Sabine-Calcasieu River Valley was completed in 1986 (Pearson et al. 1986). Five types of relict landforms were identified and evaluated for archaeological potential. Coring of selected features was performed, and sedimentary analyses suggested the potential presence of at least two archaeological sites. A subsequent BOEM study in the Galveston and High Island Areas of the northwestern Gulf of Mexico conducted remote-sensing and coring surveys of four additional areas that had been identified in industry surveys and indicated a potential presence of archaeological sites (Evans 2016). The collected cores confirmed that the paleo-landforms are preserved and had been available for use by Paleoindian or Early Archaic peoples, and evidence

of a shell midden or localized burning was present at two of the study sites, both of which are in the general vicinity of the WEAs and less than 15 nautical miles (9.3 statute miles) from WEA I. However, the evidence was ultimately inconclusive as to whether these features were naturally occurring or the result of human-induced modifications to the landscape.

High-resolution geophysical surveys on the northern Gulf of Mexico OCS have produced evidence of floodplains, terracing, and point-bar deposits in association with relict late Pleistocene fluvial systems. Precontact sites associated with these features would have a high potential for preservation. Salt diapirs with bathymetric expression have also been recorded during lease-block surveys in the Gulf of Mexico. Solution features at the crest of these domes would have a high potential for preservation of associated archaeological sites. The Salt Mine Valley site (16IB23) in Avery Island, Louisiana, is a Paleoindian site associated with a salt-dome solution feature (CEI 1977a; 1977b).

Based on sea-level rise, the Gulf of Mexico WEAs have a high potential for the presence of submerged archaeological sites dating from the Paleoindian through Early Archaic periods and a very low to no potential for the presence of submerged precontact archaeological sites more recent than the end of the Early Archaic.

Historic Period Historic Properties

Historic archaeological resources on the Gulf of Mexico OCS consist of historic shipwrecks and aircraft. A historic shipwreck is defined as a submerged or buried vessel or its associated components, at least 50 years old, that has foundered, stranded, or wrecked, and that is currently lying on or is embedded in the seafloor. Europeans are known to have traversed the waters of the western Gulf of Mexico as early as 1519 and to have shipwrecked along the Texas coast as early as 1528 (Francaviglia 1998). The earliest shipwrecks in the Gulf of Mexico region to be identified and excavated by archaeologists are from a 1554 Spanish fleet that wrecked off Padre Island, Texas (Arnold and Weddle 1978), and the 1559 expedition of Tristan de Luna that wrecked in Pensacola Bay, Florida (Smith 2018).

Spanish navigation in the Gulf of Mexico continued throughout the 16th and 17th centuries as the early exploratory expeditions expanded to include conquest and colonization. French and, to a lesser degree, English excursions into the Gulf of Mexico began in the late 17th century. As the European colonial empires continued to expand their North American territories into the early 19th century, the maritime character of the Gulf of Mexico developed into a complex international network of trade, transportation, privateering, and warfare. Beginning in the mid-19th century, technological advancements ushered in a transition of vessel types from exclusively wooden-hulled sailing ships to steam-powered vessels and, by the end of the century, iron and steel-hulled merchant and military craft. By the end of World War I, wooden-hulled merchant vessels had become all but extinct and were replaced by steel-hulled ships of gradually increasing size and cargo capacity. During World War II, many of these vessels ended up at the bottom of the Gulf of Mexico as a result of German U-boat attacks, primarily near the approaches to the Mississippi River. Shipwrecks from the entire span of European and American Gulf of Mexico maritime history are represented in the archaeological record, and shipwrecks in the Gulf of Mexico remain frequent despite centuries of technological and navigational advancements. In addition to ever-present merchant vessel losses, modern examples include commercial fishing boats, scientific research vessels, pleasure craft, drilling rigs, and other support vessels associated with the oil and gas industry.

BOEM and its predecessor agencies have commissioned multiple studies aimed at modeling and predicting areas in the Gulf of Mexico where historic shipwrecks are most likely to exist (CEI 1977a, 1977b; Garrison et al. 1989a, 1989b, 1989c; Pearson et al. 2003a, 2003b, 2003c). The study conducted by CEI (1977a, 1977b) relied primarily on secondary-source literature to determine general shipwreck site distribution and identify "theoretical boundaries between zones of relatively high and relatively low occurrence of historic-period shipwreck[s]." That study concluded that two-thirds of the total number of shipwrecks in the northern GOM are likely to lie within 1 mile (mi) (1.6 kilometers [km]) of the shore, and most of the remainder lie between 1 and 6 mi (1.6 and 10 km) of the shore. However, CEI acknowledged that these conclusions were untested and that several limitations were inherent in their source material. Published (and frequently non-scholarly) shipwreck volumes often repeat unreliable information from earlier sources, sometimes use poor translations of primary documents, and are purposefully selective in the shipwrecks they include (such as those laden with treasure) and those they omit, like small vernacular fishing and coasting vessels that are likely to be identified only in primary sources. Depending on their age, the primary sources themselves are often insufficient for identifying accurate shipwreck locations or even the occurrence of shipwrecks. The early explorers were sailing in uncharted waters and often sank out of sight of land or near landmarks or place names that no longer are recognizable today. Many wrecks had no survivors to document even rudimentary information and were simply reported, if they were reported at all, as "lost at sea" after leaving a port and never arriving at their destination, which may have been hundreds of miles away.

Historic shipwreck reports in the archival record also are hampered by the fact that, for centuries, ship navigators had a limited ability to record their geographic location with any real accuracy. Sailors have long been able to accurately determine their latitude with instruments such as the astrolabe and sextant. But they could not determine their longitude with the same accuracy until the marine chronometer was invented in England in 1762, and it took several more decades before that technology became commonly used on large merchant and naval vessels. Even the development of electronic navigation aids in the early 20th century did not significantly improve the accuracy of shipwreck reporting. World War II-era shipwrecks in the Gulf of Mexico, which had the benefit of radar positioning and eye-witness testimony, have been discovered tens of miles from their reported sinking locations, including one (the German U-boat, U-*166*) found over 100 mi (161 km) from where it was reported in official records (Church et al. 2007). Not until the advent of satellite-based technology in the second half of the 20th century, such as the global positioning system (GPS), could shipwreck locations be accurately reported.

Garrison et al. (1989a, 1989b, 1989c) built on CEI's (1977a, 1977b) study by examining not just the spatial distribution of Gulf of Mexico shipwrecks but also what factors influenced that distribution, such as port development, shipping lanes, and hurricanes. Garrison et al. concurred with CEI's main conclusion that the majority of shipwrecks occurred in nearshore waters within areas of heavy marine traffic, such as the approaches and entrances to seaports and the mouths of navigable rivers and straits. However, Garrison et al. countered that CEI had underestimated the number of wrecks in open seas due to changes in the late 19th- and early 20th-century sailing routes, particularly in the eastern Gulf of Mexico, and that there was a higher potential for unreported shipwrecks in high-traffic maritime lanes than had been identified by CEI. Garrison et al. further recommended an expansion of the areas in the Gulf of Mexico that should be considered as having the highest potential for shipwreck discoveries. Finally, Garrison et al. (1989a, 1989b, 1989c)

acknowledged that CEI (1977a, 1977b) and similar studies aimed at modeling shipwreck locations "have conceptual merit but little predictive or hindcast power in the delineation of the archaeology of the OCS" and that "the [Garrison et al.] study cannot redress this lack of primary, direct archaeological observations which are necessary to construct a realistic picture of historic cultural resources on the northern Gulf OCS."

Pearson et al. (2003a, 2003b, 2003c) again revisited the concept of a probability model for shipwreck occurrence on the Gulf of Mexico OCS. Pearson et al. (2003a, 2003b, 2003c) produced a GIS-based database of over 2,000 reported Gulf of Mexico shipwrecks, adding over 600 new wrecks to the list compiled by Garrison et al. (1989a, 1989b, 1989c). Pearson et al. (2003a, 2003b, 2003c) also had the benefit of over a decade of confirmed shipwreck discoveries (or absence thereof) from oil and gas industry surveys with which to test the efficacy of Garrison et al.'s (1989a, 1989b, 1989c) model. In brief, they concluded that "there is no statistically significant difference between discovering a shipwreck in an identified high probability lease block or in finding one in a lease block not assigned a high probability of containing historic wrecks." This conclusion was based, in part, on the unreliability of reported wreck locations as well as a significant underreporting of vessel losses, particularly prior to the mid-19th century.

BOEM continues to add to the wreck database created by Pearson et al. (2003a, 2003b, 2003c), which now contains over 2,200 reported and confirmed shipwrecks (BOEM 2023). Approximately 420 shipwrecks have confirmed locations, and BOEM has determined that 39 of these are potentially eligible for listing on the NRHP based on remotely operated vehicle or diver investigations. Eligible or potentially eligible OCS wrecks that have been discovered include a sailing vessel from the late 17th or early 18th century; numerous wooden-hulled merchant sailing vessels spanning the early 19th to early 20th centuries (Atauz et al. 2006; Brooks et al. 2016; Church and Warren 2008; Horrell and Borgens 2017); the mid-19th century sidewheel steamboats USS *Hatteras* (Enright et al. 2006; Evans et al. 2013) and SS *New York* (Gearhart et al. 2011); and 15 of the 56 Allied merchant vessel casualties, plus U-*166*, sunk during World War II (Brooks et al. 2016; Church et al. 2007; Enright et al. 2006; Evans et al. 2013). Eleven of these sites have been listed on the NRHP and they are currently the only shipwrecks listed from the Gulf of Mexico OCS. None of the confirmed historic shipwreck sites that BOEM has determined are potentially eligible for listing are located within the WEAs.

A search of BOEM's shipwreck database (BOEM 2024) revealed that there are 19 reported shipwrecks in the vicinity of the WEAs, 9 of which have dates for sinking (Table 2). Additionally, the accuracy of the reported shipwreck locations is medium to low, and their actual locations may be outside of the WEAs. BOEM's database of known and reported shipwrecks is by no means exhaustive or complete. This is due to the underreporting and unreliability of shipwreck information in the historic record as discussed in CEI (1977a, 1977b), Garrison et al. (1989a, 1989b, 1989c), and Pearson et al. (2003a, 2003b, 2003c), as well as the inability of BOEM's previous studies to investigate every possible archival source.

Additionally, BOEM maintains a separate database of magnetic anomalies and side-scan sonar targets that were located during oil and gas industry surveys, exhibit characteristics indicative of potential shipwrecks, and which have been assigned avoidance mitigation requirements during previous BOEM-permitted activities. Within the WEAs there are approximately 91 magnetic anomalies and 12 sonar targets meeting those criteria. None of these targets have been further

investigated to determine whether they are in fact historic properties; however, in the absence of additional information BOEM considers them to be potentially eligible for listing on the NRHP.

Table 2. Shipwrecks Reported in the Vicinity of the Gulf of Mexico WEAs.

Area ID Vicinity	Vessel ID	Vessel	Position Accuracy	Year Sunk	History
J	235	*Florence B.*	Medium	1984	No information available
J	1916	18 FT P/C	Medium	1977	No information available
J	15531	Unknown	High	Unknown	No information available
J	1942	21 Ft P/C	Medium	1996	No information available
J	286	Unknown Vessel	Medium	Unknown	Old Derelict Vessel Sunk USCGC Saginaw
J	287	*Nuevo Currutaco*	Medium	1889	Brigantine
J	290	*Nancy F.*	Medium	1959	Lost Off Coast of Texas South of Sabine Light
J	288	*Patricia B*	Medium	Unknown	No information available
J	1438	*Seawolf*	Medium	1960	Vessel Lost in 132 feet of Water
K	15814	Unknown Vessel	High	Unknown	No information available
K	14449	Unknown Vessel	Low	Unknown	No information available
K	12066	Unknown Vessel	Medium	Unknown	No information available
K	14450	Unknown Vessel	Low	Unknown	No information available
N	903	*Lafourche*	Low	1971	Reported sinking in East Cameron Area
N	792	*Vona Mabry*	Medium	1956	Vessel collided with *Lamyra* and sank
N	15243	Unknown Sonar Contact	High	Unknown	No information available
N	1417	*Gulf Queen*	Low	1985	Vessel collided with M/V *Alan McCall* and sank
N	323	Unknown Vessel	High	Unknown	Vessel upside down with two screws showing; likely an offshore supply vessel
N	11969	Object	Medium	Unknown	Unknown debris

Note: No recorded shipwrecks are in the vicinity of Wind Energy Area L.
Source: BOEM 2024.

III. Required Elements in the Lease and/or Grant

BOEM will require lessees to avoid or minimize potential impacts on the environment by complying with regulatory requirements and conditions imposed by consultations. Standard Operating Conditions (SOCs) will be implemented through lease stipulations to reduce or eliminate potential risks to or conflicts with specific environmental resources, including potential historic properties. Implementation of these lessee requirements through lease stipulations will avoid or minimize potential impacts to historic properties, thus establishing BOEM's Finding of No Historic Properties Affected for this undertaking, consistent with 36 CFR § 800.4(d)(1). Inclusion of the following elements in the lease is expected to result in the identification and avoidance of historic properties and is a requirement of this Finding.

The elements below, designed to avoid impacts on offshore historic properties from ground-disturbing activities associated with site characterization surveys, would be included in a commercial lease issued for the Gulf of Mexico WEAs.

- The lessee must not knowingly affect a potential archaeological resource without the lessor's prior approval.
- The lessee must provide the results of an archaeological survey with its plans.
- The lessee must ensure that the analysis of archaeological survey data collected in support of plan submittal and the preparation of archaeological reports in support of plan submittal are conducted by a Qualified Marine Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739) and has experience analyzing marine geophysical data.
- The lessee may only conduct geotechnical exploration activities in support of plan submittal in locations where an archaeological analysis of the results of geophysical surveys have been completed. This analysis must include a determination by a Qualified Marine Archaeologist as to whether any potential archaeological resources are present in the area that could be affected by bottom-disturbing activities.
- Geotechnical sampling activities must avoid any potential archaeological resources by a minimum of 164 ft (50 m). The avoidance distance must be calculated by the Qualified Marine Archaeologist from the maximum discernible extent of the archaeological resource.
- Upon completion of geotechnical exploration activities, a Qualified Marine Archaeologist must certify, in the lessee's archaeological report(s) submitted with a plan, that such activities did not affect potential historic properties identified as a result of the HRG surveys performed in support of plan submittal.

In addition, BOEM would require that the lessee observe the unanticipated finds requirements at 30 CFR § 585.802. The elements below would be included in a commercial lease issued within the Gulf of Mexico WEAs.

- If the lessee, while conducting site characterization activities in support of plan submittal (i.e., SAP and/or COP or GAP), discovers a potential archaeological resource, such as the presence of a shipwreck or precontact archaeological site within the project area, the lessee must
    - Immediately halt seafloor-disturbing activities in the area of discovery;
    - Notify the lessor within 24 hours of discovery;
    - Notify the lessor in writing by report within 72 hours of its discovery;
    - Keep the location of the discovery confidential and take no action that may adversely affect the archaeological resource until the lessor has made an evaluation and instructs the applicant on how to proceed; and
    - Conduct any additional investigations as directed by the lessor to determine if the resource is eligible for listing in the NRHP (30 CFR § 585.802(b)). The lessor will direct the lessee to conduct such investigations if (1) the site has been affected by the lessee's project activities or (2) impacts on the site

or on the APE cannot be avoided. If investigations indicate that the resource is potentially eligible for listing in the NRHP, the lessor will tell the lessee how to protect the resource or how to mitigate adverse effects on the site. If the lessor incurs costs in protecting the resource, under Section 110(g) of the NHPA, the lessor may charge the lessee reasonable costs for carrying out preservation responsibilities under the OCSLA (30 CFR § 585.802(c-d)).

IV. Basis for the Determination of No Historic Properties Affected

This Finding is based on a review of existing and available information conducted by BOEM; consultation with federally recognized Tribes, SHPOs, and consulting parties; avoidance stipulations outlined in the required elements of a lease or grant; and conclusions drawn from this information. The proposed undertaking includes the issuance of commercial or research leases within the Gulf of Mexico WEAs and ROW/RUE grants in the region and takes into account the execution of associated site characterization activities.

The identification and avoidance measures that will be included as stipulations in leases and grants will require that any site characterization activities following lease issuance that have the potential to affect historic properties will avoid them. Therefore, no historic properties will be affected for the undertaking of issuing a commercial lease within the Gulf of Mexico WEAs, consistent with 36 CFR § 800.4(d).

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VI. Appendices

Appendix A: Gulf of Mexico Area Identification Memorandum Pursuant to 30 CFR § 585.211(b)

Appendix B: List of Consulting Parties and Potential Consulting Parties and Letter Invitation

Appendix C: Invitation and Draft Section 106 Finding of Effect Transmittal Letter

Appendix D: Comments on Draft Section 106 Finding of Effect

Appendix A: Gulf of Mexico Area Identification Memorandum Pursuant to 30 CFR § 585.211(b)

United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT

New Orleans Office

1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

Memorandum

To: Elizabeth Klein
Director, Bureau of Ocean Energy Management

From: James Kendall
Regional Director, Gulf of Mexico Regional Office

Subject: Gulf of Mexico Wind Lease Sale 2 (GOMW-2) Area Identification Pursuant to 30 CFR § 585.211(b)

I. Purpose

The purpose of this memorandum is to document the analysis and rationale used to develop recommendations for four Final Wind Energy Areas (WEAs) in the Gulf of Mexico (GOM) that are offshore the states of Louisiana and Texas. The Bureau of Ocean Energy Management's (BOEM) New Orleans Office is requesting concurrence from the BOEM Director on the recommended Final WEAs.

II. Development of the Recommended Final WEAs and the Area Identification Process Overview

A. Request for Interest

On June 11, 2021, BOEM issued a Request for Interest (RFI) for Commercial Leasing for Wind Power Development on the GOM Outer Continental Shelf (OCS). The RFI is a preliminary step used to gauge potential interest in obtaining commercial wind leases in areas on the GOM OCS and to gather information about the RFI Area. See 86 FR 31339. The RFI Area comprised the entire Central Planning Area (CPA) and Western Planning Area (WPA) of the Gulf of Mexico, excluding the portions of those areas located in water depths greater than 1,300 meters (**Figure 1**). BOEM issued the RFI not only to identify potential opportunities for renewable energy development in the GOM, but also to gather additional information about possible constraints on such development. In addition to soliciting public comment via the RFI, BOEM held its first GOM Intergovernmental Renewable Energy Task Force (Task Force) meeting on June 15, 2021. The Task Force meeting included representatives of the Louisiana, Texas, Mississippi, and Alabama state governments, as well as other representatives from Tribes, and relevant Federal and local government entities. The comment period for the RFI ended on July 26, 2021. BOEM received 39 comments and 10 indications of interest in a commercial wind energy lease within the RFI Area, which are available at https://www.regulations.gov/document/BOEM-2021-0041- 0001.

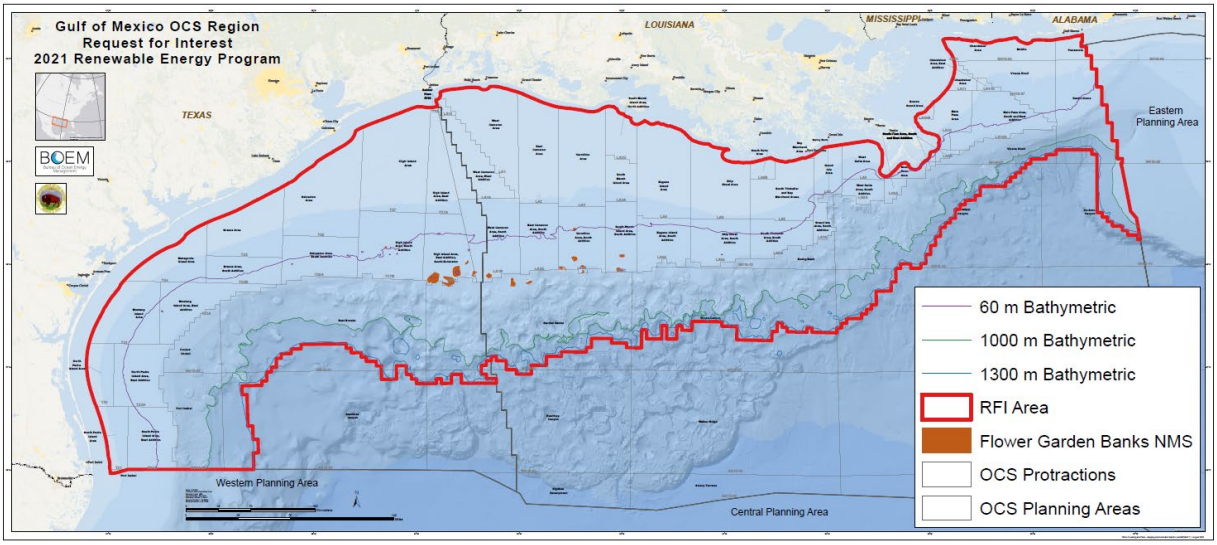

Figure 1: Gulf of Mexico RFI Area

B. Call for Information and Nominations

On November 1, 2021, BOEM published a *Call for Information and Nominations – Commercial Wind Leasing for Wind Power Development on the OCS in the GOM* (Call). See 86 FR 60283. BOEM used the Call both to solicit lease nominations for a commercial wind energy lease beyond those identified in response to the earlier RFI and to request comments from interested and affected parties regarding site conditions, resources, and uses of the identified area that would be relevant to BOEM's potential leasing and development authorization process. BOEM delineated the Call Area after considering the comments from the RFI and consulting with numerous parties and information sources, including the states of Alabama, Mississippi, Louisiana, and Texas, and the Task Force (**Figure 2**). The Call Area comprised the area located seaward of the Gulf of Mexico Submerged Lands Act Boundary, bounded on the east by the north-south line located at -89.857° W. longitude, and bounded on the south by the 400-meter bathymetry contour, and the U.S. Mexico Maritime Boundary established by the Treaty between the Government of the United States of America and the Government of the United Mexican States on the Delimitation of the Continental Shelf in the Western Gulf of Mexico beyond 200 Nautical Miles (U.S.-Mexico Treaty), which took effect in January 2001.

Additionally, BOEM hosted a second Task Force meeting on February 2, 2022. The Task Force meeting included participation from members of all involved States, as well as other representatives from Tribes and relevant Federal and local government entities. BOEM also hosted four sector-specific fisheries meetings to collect information that would help to avoid, minimize, or mitigate potential impacts on commercial and recreational fisheries. During and after the Call comment period, BOEM held or attended over 40 informational sessions with many stakeholders to better understand concerns related to potential impacts to military activities, fisheries, navigation, and other potential use conflicts.

The comment period for the Call ended on December 16, 2021. BOEM received 40 comments and 8 nominations, which are available at https://www.regulations.gov/document/BOEM-2021-0077.

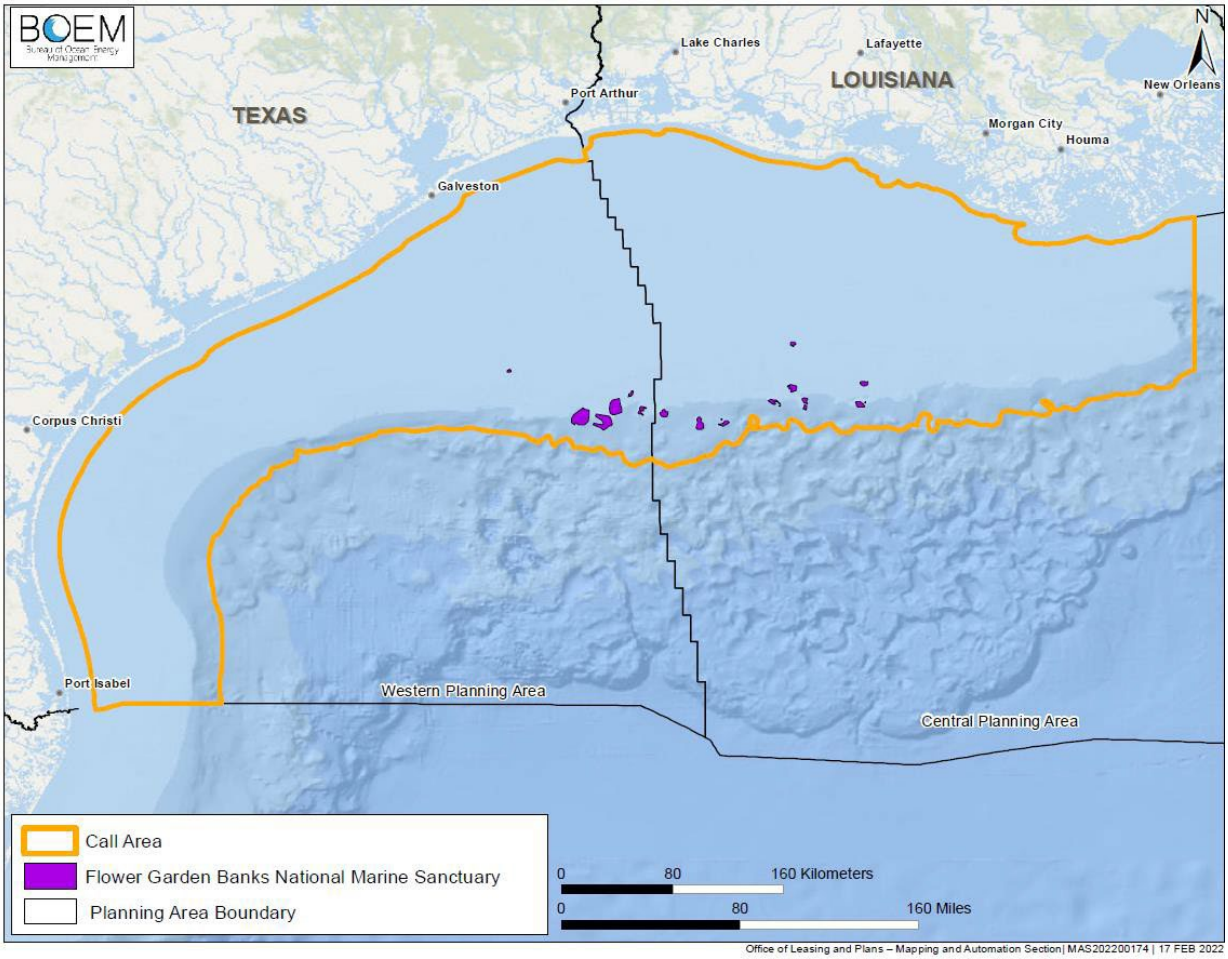

Figure 2: Gulf of Mexico Call Area

C. Wind Energy Area Options

BOEM received ocean users' feedback suggesting that BOEM consider leveraging an existing ocean planning model previously used in the GOM for National Oceanic and Atmospheric Administration's (NOAA) Aquaculture Opportunity Areas for ocean planning purposes. In response, BOEM partnered with NOAA's National Centers for Coastal Ocean Science (NCCOS) to utilize an ocean planning model to help support identification of WEA Options. The methods of this model and a Final Report entitled, "A Wind Energy Area Siting Analysis for the Gulf of Mexico Call Area" can be found at https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/GOM-WEA-Modeling-Report-Combined.pdf.

As a result of the modeling efforts, BOEM identified a number of suitable areas for wind energy development, the locations of which were distributed from offshore the east coast of Texas to offshore southwest Louisiana. Fourteen WEA Options were identified that ranked in the top five percent of the suitable areas, ranging from 39,836 acres to 546,645 acres (**Figure 3**). After the model was run, the Department of Defense (DoD) submitted its preliminary assessment of the Call Area. As a result of the DoD preliminary assessment, BOEM removed WEA Option B from further consideration, leaving 13 viable WEA Options.

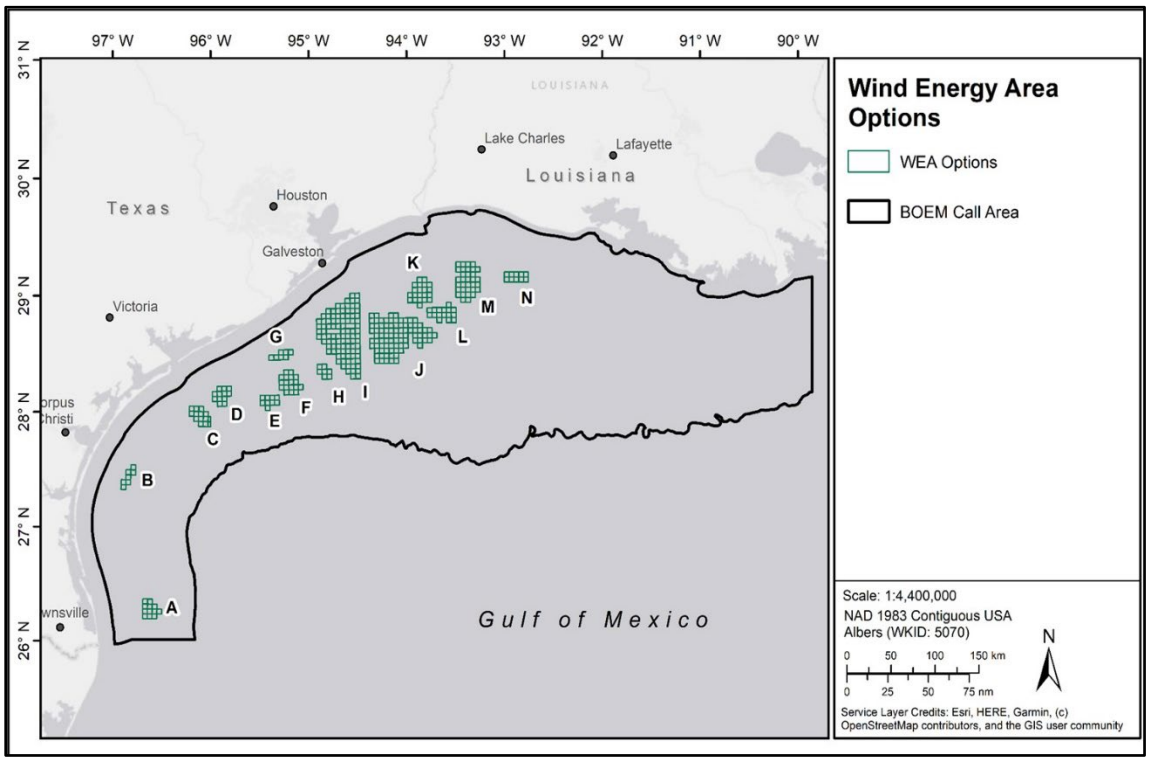

Figure 3: 13 WEA Options from the Model Output

D. Preliminary and Final WEAs for the First Gulf of Mexico Wind Lease Sale (GOMW-1)

On July 20, 2022, BOEM published on Regulations.gov for public comment the analysis and rationale used to develop recommendations for the two Preliminary WEAs selected (Preliminary WEAs I and M) to offer in the first Gulf of Mexico Wind Lease Sale (GOMW-1). The detailed analysis and the rationale for the recommendations are documented in the *GOM WEA Memorandum*, which can be found at https://www.boem.gov/renewable-energy/state-activities/gulf-mexico-draft-weas.

BOEM received 107 comments on the Preliminary WEAs. BOEM reviewed and analyzed the comments and ultimately made several revisions to the Preliminary WEAs to define the Final WEAs. These changes are outlined and the Final WEAs for GOMW-1 were announced on October 31, 2022, in the Gulf of Mexico Area Identification Memo available at https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/4683-Memorandum-for-Area-ID-GOM.pdf . The GOMW-1 auction was held on August 29, 2023, and offered three areas (Galveston I, Galveston II, and Lake Charles) for lease, which are within the two Final Wind Energy Areas (I and M). This sale resulted in one lease area receiving a high bid of $5.6 million. RWE Offshore US Gulf, LLC was the winner of the Lake Charles Lease Area, which has the potential to generate approximately 1.24 gigawatts of offshore wind energy capacity and power nearly 435,400 homes with clean, renewable energy. While Galveston I and II were not leased in GOMW-1 lease auction, WEA I remains a Final WEA as designated on October 31, 2022, in the Gulf of Mexico Area Identification Memo available at https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/4683-

Memorandum-for-Area-ID-GOM.pdf. Moving forward, WEA I will be available for potential lease area siting in future auctions.

E. Recommended Final WEAs for the Second Gulf of Mexico Wind Lease Sale (GOMW-2)

Offshore wind developers have requested BOEM offer more acreage in the GOM east of WEA I for leasing. A potential GOMW-2 sale (combined with GOMW-1) would offer sufficient acreage for leasing to allow for robust development to help meet the state of Louisiana's goal of 5 GW of offshore wind. Building on the extensive outreach, coordination, and progress made by the GOMW-1 leasing process, BOEM is recommending selection of the Final WEAs from the WEA Options discussed in Section IIc for GOMW-2. GOMW-2 will build off the feedback already provided for GOMW-1. BOEM did not issue GOMW-2 Preliminary WEAs for comment but, to maintain transparency, BOEM sought input from stakeholders during the Area Identification (Area ID) process. From June through August 2023, BOEM engaged with federal partners, federally recognized Tribes, the affected states as well as other stakeholders and ocean users to solicit input and feedback on the 11 remaining WEA Options. On August 2, 2023, BOEM held a "round table" meeting with major stakeholders to gather input and answer questions on wind development in the GOM and have continued the outreach and engagement conversations to date. BOEM considered and incorporated comments received into the recommendation of these Final WEAs. New data was solicited and reviewed from stakeholders and it was determined that the NCCOS Model finalized May 2022 (as described in section C) is still considered best available data for deconflicting. Substantive comments underscored the need to minimize potential impacts to the fisheries industry, consider United States Coast Guard and Department of Defense missions and potential concerns, and provide sufficient WEA acreage for economic viability. Based on this input, BOEM removed from consideration the WEAs with mid to high levels of potential shrimping impacts and WEA Options with less than 90,000 acres with the exception of WEA Option N. WEA Option N is being recommended as a final WEA based on potential economic viability due to its proximity to the existing Lake Charles lease area. Therefore, BOEM is recommending as final WEAs J, K, L and N. The recommended Final WEAs for GOMW-2 are described in **Table 1** and **Figures 4-8**.

Table 1: GOMW-2 Recommended Final WEAs Descriptive Statistics

	Acres	Installation Capacity[1]	Homes Powered[2]	Power Production (MWh/yr.)[3]	Max Depth (meters)	Min Depth (meters)	Closest Distance to TX (km)	Closest Distance to LA (km)
WEA Option J	495,567	6,016	2,105,600	21,080,068	46	22.5	76 km	
WEA Option K	119,635	1,452	508,200	5,089,279	23.8	17.4	98.9 km	133.3 km
WEA Option L	91,157	1,107	387,450	3,878,928	29	18.3	85.2 km	
WEA Option N	56,978	692	242,200	2,424,768	21.9	16.8		132.5 km
TOTAL	**763,337**	**9,267**	**3,243,450**	**32,473,043**				

[1] Megawatts (MW) based upon 3MW/sqkm

[2] Megawatt hours per year (MWh/yr) based upon 350 homes per MW

[3] Formula = Capacity (MW) * 8760 (hrs/yr) * 0.4 (capacity factor)

To facilitate the Area ID planning process, BOEM's GOM Regional Office recommends maintaining flexibility by identifying more WEAs than identified for GOMW-1. In recommending the GOMW-2 Final WEAs, BOEM is advancing the Biden-Harris Administration's goal to achieve 30 GW of offshore wind by 2030 and net zero emissions by 2050. BOEM also aims to: be responsive to Louisiana's renewable energy goals, increase the potential for competition in future offshore wind energy solicitations, and develop a predictable leasing pipeline.

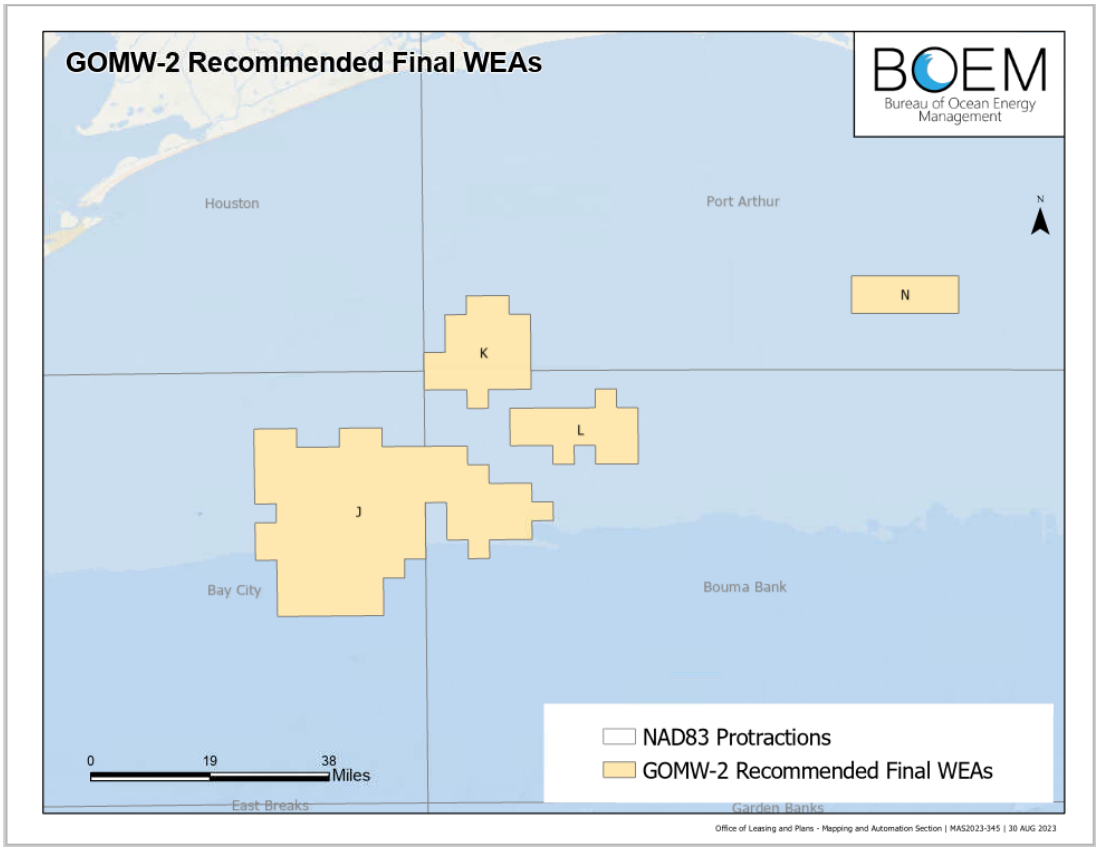

Figure 4: 4 Recommended Final WEAs

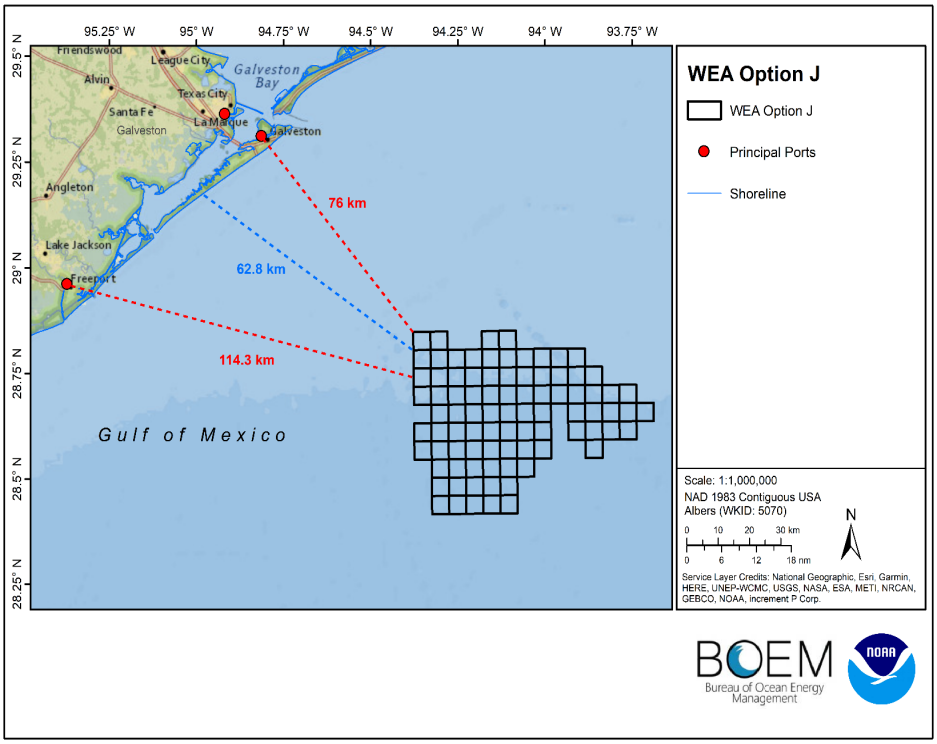

Figure 5: WEA Option J

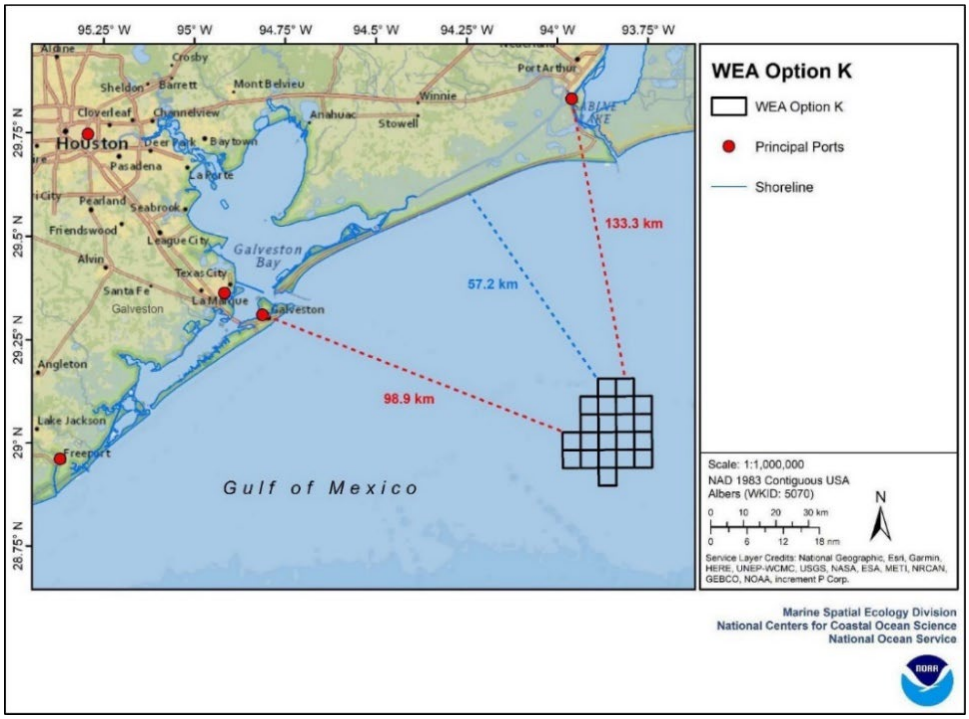

Figure 6: WEA Option K

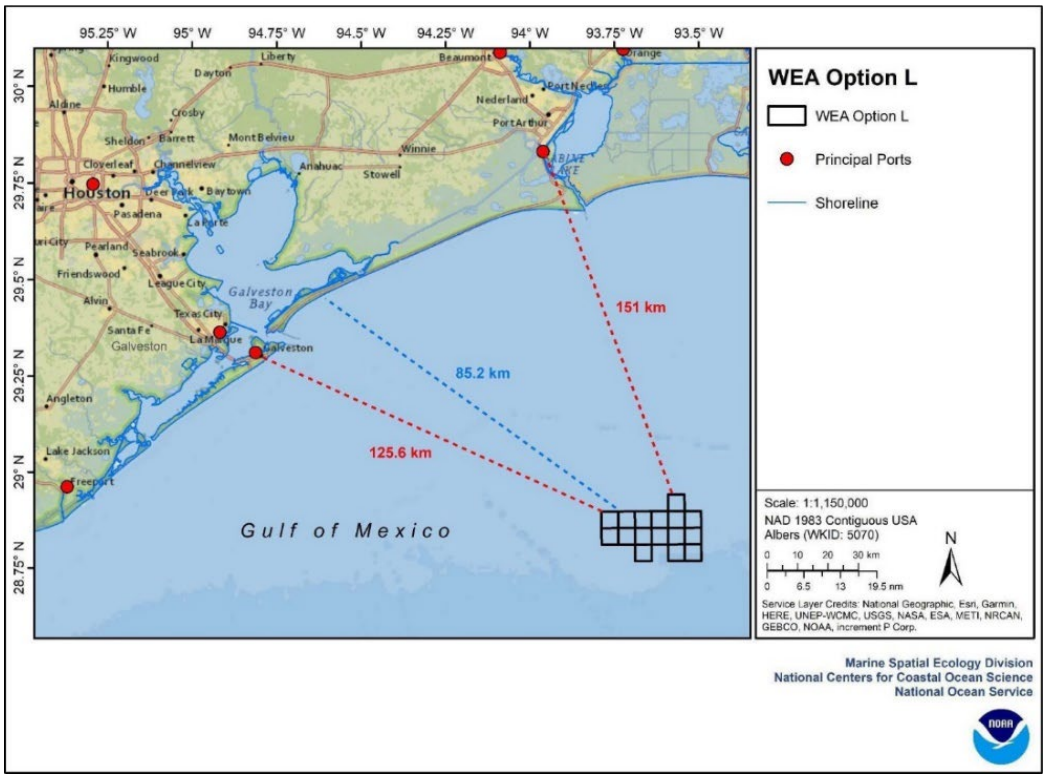

Figure 7: WEA Option L

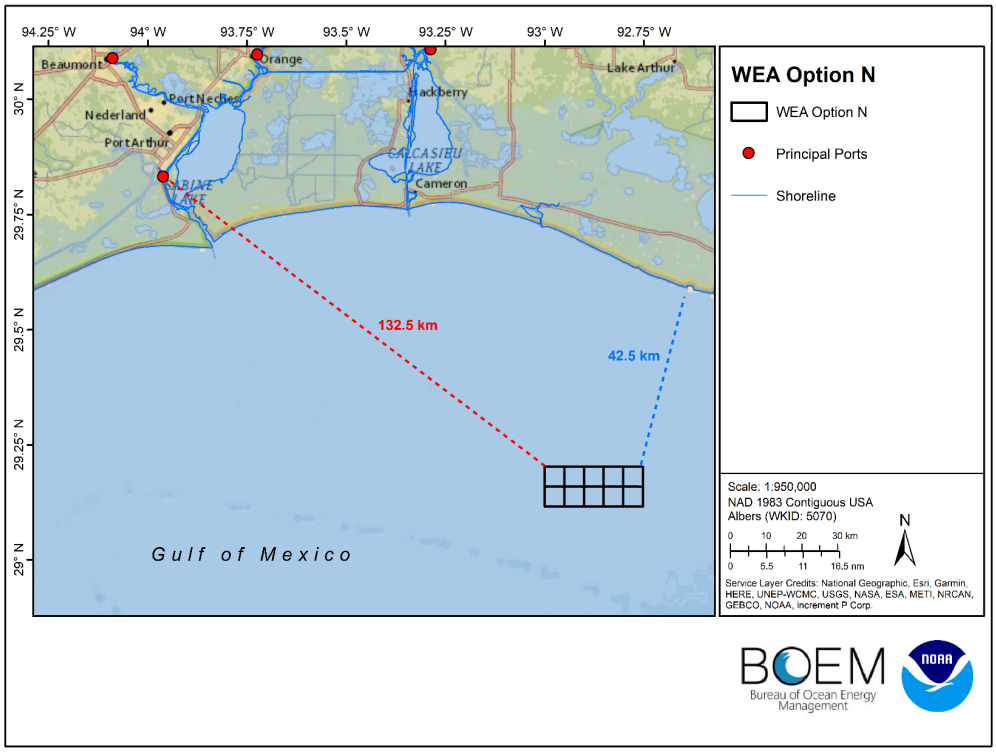

Figure 8: WEA Option N

F. Environmental Review

BOEM prepared a programmatic GOM Wind Lease Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA). The Final EA published on May 30, 2023, and can be found at https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/GOM%20Wind%20Lease%20EA_0.pdf. The analysis provided in the GOM Wind Lease EA considered the issuance of up to 18 OCS wind energy leases and the potential impacts from activities expected to take place after lease issuance, including site characterization activities (such as biological, geological, geotechnical, and archaeological surveys) and site assessment activities (such as meteorological and oceanographic buoy deployment). The EA also compares the potential impacts of site characterization and site assessment activities to the potential cumulative effects from these activities, as well as other past, present, and reasonably foreseeable future activities in the GOM.

The EA analyzed the entire GOM Call Area, not just the GOMW-1 Final WEAs. Although NEPA analysis is not required at the Area ID stage, BOEM decided to prepare an EA prior to the identification of the GOMW-1 Preliminary WEAs as an exercise of agency discretion. This approach not only allows greater flexibility for future identification of WEAs, but also provides NEPA coverage for unsolicited requests for commercial or research projects and grants that could be received for areas within the GOM Call Area. The Call informed the environmental review process by identifying and informing the geographic scope of that environmental analysis for any future OCS wind energy lease sales in the area. The issuance of any OCS wind energy leases resulting from such sales would grant the lessees only the exclusive right to submit plans for BOEM's review. The issuance of a lease by BOEM does not convey the right to proceed with construction and operation of a wind energy facility. Therefore, BOEM does not consider the issuance of a lease to constitute an irreversible and irretrievable commitment of resources.

Consultations with the U.S. Fish and Wildlife Service under the Endangered Species Act (ESA) and with National Marine Fisheries Service (NMFS) for Essential Fish Habitat (EFH) under the Magnusson-Stevens Fishery Management and Conservation Act were completed previously and provide coverage for potential leasing within the entire Call Area. The ESA consultation with NMFS was limited to areas within the 100-m isobath of the Call Area. These ESA and EFH consultations cover a geographic area that includes all WEAs considered for GOMW-1 and GOMW-2.

Before holding the GOMW-2 auction, BOEM will ensure that Tribal nations and the appropriate parties are invited to consult on the proposed lease sale and potential impacts from site characterization and site assessment activities. Under Executive Order 13175, tribal consultation will be offered at a government-to-government level. Additionally, under Section 106 of the National Historic Preservation Act, potentially affected Tribes and stakeholders will be invited to consult with BOEM and the Bureau of Safety and Environmental Enforcement on the proposed lease sale and site characterization and site assessment activities likely to occur if an area is leased.

BOEM will also conduct consultations with appropriate state agencies under the Coastal Zone Management Act before any OCS wind energy lease sale. If an OCS wind energy lease is issued and a lessee submits a Construction and Operations Plan (COP) proposing development activities on that lease, BOEM would consider its merits; perform the necessary consultations with the appropriate state, Federal, local, and Tribal entities; solicit input from the public and Task Force members; and perform an independent, comprehensive, environmental analysis under NEPA for the activities proposed in the COP. The separate environmental analysis for a COP would provide additional opportunities for public involvement pursuant to NEPA and the Council on Environmental Quality regulations at 40 CFR parts 1500–1508. BOEM would use this information to evaluate the potential environmental and socioeconomic impacts associated with the lessee-proposed project, and potential cumulative effects from these activities as well as other past, present, and reasonably foreseeable future actions, when considering whether to approve, approve with modification, or disapprove a lessee's COP pursuant to 30 CFR § 585.628.

III. Conclusion

As a result of the comments received and as discussed above, BOEM's GOM Regional Office is recommending four Final Wind Energy Areas for GOMW-2. While BOEM deemed 13 Wind Energy Area Options suitable for wind energy development during the GOMW-1 sale process, BOEM selected only two WEA Options as Final WEAs for the GOMW-1 auction. Through continued outreach and engagement efforts, and the successful outcome of GOMW-1, BOEM believes there is justifiable industry interest and economic value to identify additional Final WEAs for a GOMW-2 lease sale. In support of the Biden-Harris Administration's goal to achieve 30 GW of offshore wind by 2030 and net zero emissions by 2050, BOEM recommends selection of the four Final WEAs.

I. Director Concurrence

_____ Yes

_____ No

_____ _____

Elizabeth Klein Date
Director, Bureau of Ocean Energy Management

Appendix B: List of Consulting Parties and Potential Consulting Parties and Letter Invitation Example

The entities below were Confirmed Consulting Parties under National Historic Preservation Act Section 106.

- Aransas County Historical Society
- Choctaw Nation of Oklahoma
- Louisiana Division of Archaeology
- Padre Island National Seashore
- Seminole Tribe of Florida
- Terrebonne Parrish
- Texas Historical Commission
- Texas Maritime Museum

The Bureau of Ocean Energy Management sent letters inviting the entities below to become National Historic Preservation Act Section 106 Consulting Parties.

Federally Recognized Tribes

- Absentee-Shawnee Tribe of Indians of Oklahoma
- Alabama-Coushatta Tribe of Texas
- Alabama-Quassarte Tribal Town
- Apache Tribe of Oklahoma
- Caddo Nation of Oklahoma
- Cheyenne and Arapaho Tribes of Oklahoma
- Chitimacha Tribe of Louisiana
- Choctaw Nation of Oklahoma
- Comanche Nation of Oklahoma
- Coushatta Tribe of Louisiana
- Eastern Shawnee Tribe of Oklahoma
- Jena Band of Choctaw Indians
- Kiowa Indian Tribe of Oklahoma
- Mescalero Apache Tribe
- Miccosukee Tribe of Indians of Florida
- Mississippi Band of Choctaw Indians; Muscogee (Creek) Nation
- Poarch Band of Creek Indians
- Seminole Nation of Oklahoma
- Seminole Tribe of Florida; Shawnee Tribe
- Southern Ute Indian Tribe
- Thlopthlocco Tribal Town
- Tonkawa Tribe
- Tunica-Biloxi Tribe of Louisiana.

All Other Parties

- Advisory Council on Historic Preservation
- Louisiana Office of Cultural Development, Division of Historic Preservation
- Texas Historical Commission
- Adai Caddo Indians of Louisiana
- Aransas County Historical Commission
- Bayou Lafourche Band of Biloxi-Chitimacha Confederation of Muskogees
- Brazoria County, Texas
- Calhoun County, Texas
- Cameron County, Texas
- Cameron Parish, Louisiana
- Chambers County, Texas
- Choctaw-Apache Tribe of Ebard
- Four Winds Cherokee
- Galveston County, Texas
- Grand Caillou/Dulac Band of Biloxi Chitimacha Choctaw
- Harris County, Texas
- Iberia Parish. Louisiana
- Jackson County, Texas
- Jean Charles Choctaw Nation
- Jean Lafitte National Park
- Jefferson County Historical Commission
- Jefferson Parish, Louisiana
- Kenedy County, Texas
- Kleberg County, Texas
- Lafourche Parish, Louisiana
- Louisiana Band of Choctaw Indians
- Louisiana Governor's Office of Indian Affairs
- Louisiana Historical Society
- Matagorda County, Texas
- Natchitoches Tribe of Louisiana
- Nueces County, Texas
- Nueces County Coastal Parks
- Orleans Parish, Louisiana
- Padre Island National Seashore
- Palo Alto Battlefield National Historical Park
- Plaquemines Parish, Louisiana
- Pointe-au Chein-Indian Tribe
- San Patricio County, Texas
- St. Bernard Parish, Louisiana
- St. Mary Parish, Louisiana
- Terrebonne Parish, Louisiana
- Texas Maritime Museum
- United Houma Nation

- U.S. Army Corps of Engineers, New Orleans District
- U.S. Coast Guard
- U.S. Fish and Wildlife Service
- Vermilion Parish, Louisiana
- Willacy County, Texas

Appendix C: Consultation Letters

United States Department of the Interior
BUREAU OF OCEAN ENERGY MANAGEMENT
New Orleans Office
1201 Elmwood Park Blvd
New Orleans, Louisiana 70123-2394

21 December 2023

[redacted]

[redacted]

The intent of this letter is to initiate the Section 106 of the National Historic Preservation Act (NHPA) for a second wind energy auction in the Gulf of Mexico (GOMW-2) and invite the [redacted] to consult as part of this process. To provide additional context on this action, in January 2022, the Bureau of Ocean Energy Management (BOEM) announced the identification of a Call Area for potential wind energy leasing located in Federal waters offshore Texas and Louisiana, pursuant to 30 Code of Federal Regulations (CFR) Part § 585.211(a). The Call Area represents an area of the Outer Continental Shelf (OCS) where BOEM may issue leases and grant rights-of-way (ROW) or rights-of-use (RUE) in support of wind energy development. BOEM completed an environmental assessment and finding of no significant impact for the entire Call Area that considered the potential impacts associated with issuing a lease (e.g., installation of meteorological [met] buoys) and granting a ROW or RUE, or actions expected to take place after lease issuance (e.g., geophysical and geotechnical surveys within the Call Area and potential export cable corridors, including in state waters). Within that Call Area, BOEM previously identified two Wind Energy Areas (WEAs) which were offered as part of the first wind energy auction in the Gulf of Mexico (GOMW-1). For GOMW-1, the undertaking consisted of the proposed issuance of commercial or research leases within WEAs "I" and "M" and granting of ROWs and RUEs in the region that could include the execution of associated site characterization activities on these leases or grants. The Section 106 process was implemented for that undertaking and BOEM found that no historic properties would be affected.

The BOEM Gulf of Mexico Region is now proceeding with the implementation of a similar process for GOMW-2 and has identified four new WEAs: J, K, L, and N. Additionally, WEA "I" which was included in GOMW-1 would also be offered as part of GOMW-2. Similar to GOMW-1, BOEM has determined the issuance of commercial or research leases within WEAs J, K, L, N, and I, and granting of ROWs and RUEs in the region that could include the execution of associated site characterization activities on these leases or grants as part of GOMW-2 constitutes an undertaking subject to Section 106 of the NHPA.

BOEM has determined that the issuance of commercial and research wind energy leases and the potential granting of a ROW or RUE constitutes an undertaking subject to Section 106 of the NHPA and, as such, BOEM will serve as the lead Federal agency for the NHPA Section 106 review. Therefore, this letter has three purposes:

- To invite the [redacted] to consult as part of the Section 106 process;
- To provide information on the undertaking and the preliminary Area of Potential Effect (APE) (enclosed); and
- To provide information on the next steps in the Section 106 process

1. Invitation to Consult Under Section 106 of the NHPA

BOEM would like to formally invite the [redacted] to consult with BOEM during the Section 106 review of this undertaking. With this letter, BOEM intends to initiate consultation regarding this undertaking and potential impacts on cultural resources.

2. Definition of the Undertaking and Area of Potential Effect for the Undertaking

The undertaking includes the proposed issuance of commercial or research leases within the WEAs and granting of ROWs and RUEs in the region and considers the execution of associated site characterization activities on these leases or grants. A lessee must submit the results of site characterization surveys with their plans (e.g., 30 CFR § 585.610, § 585.626, and § 585.645). Although BOEM does not issue permits or approvals for these site characterization activities, it will not approve a lessee's plan if the required survey information is not included. Issuance of a lease does not grant the lessee the right to construct any facilities; rather the lease grants the lessee the right to conduct site assessment and site characterization activities to inform its lease development plans. BOEM must approve a plan before the lessee can move on to the next stage of the process. Should a lessee submit a plan in the future, a separate plan-specific Section 106 review would take place at that time.

Site characterization activities include both high-resolution geophysical (HRG) surveys, which do not involve seafloor-disturbing activities, and geotechnical investigations, which may include seafloor-disturbing activities. The purpose of HRG survey is to acquire shallow hazards data, identify potential archaeological resources, characterize seafloor conditions, and conduct bathymetric charting. BOEM anticipates that HRG surveys would be conducted using the following equipment: swath bathymetry system, magnetometer/gradiometer, side-scan sonar, and shallow and medium (seismic) sub-bottom profiler systems. This equipment is typically towed from a moving survey vessel that does not require anchoring and is not expected to contact with seafloor.

Geotechnical testing or sampling involves seafloor-disturbing activities and therefore has the potential to cause effects on historic properties. Geotechnical testing is conducted to assess the suitability of sediments to support a structure or transmission cable under any operational and environmental conditions that might be encountered (including extreme events), and to document soil characteristics necessary for the design and installation of all proposed structures and/or cables. Geotechnical investigation may include the use of equipment such as gravity cores,

piston cores, vibracores, deep borings, and Cone Penetration Tests, among others. Some of these methods may additionally require the use of anchored vessels, multi-point anchored barges, or jack-up barges.

BOEM also anticipates cases where geotechnical testing methods may be employed as part of the identification of historic properties. In some instances, direct sampling may be the only available method of testing the presence or absence of horizons of archaeological potential within features of interest identified during geophysical survey.

The undertaking does not, however, include cable installation or connection to shore-based facilities, installation of site assessment equipment (e.g., meteorological buoys), or construction or operation of commercial-scale wind energy facilities. Should a lessee propose to deploy site assessment equipment within the Gulf of Mexico WEAs, they would submit a Site Assessment Plan (SAP) to BOEM, which BOEM would consider under a separate Section 106 review. Should a lessee propose to construct and operate a commercial-scale wind energy facility within the Gulf of Mexico WEAs, they would submit a Construction and Operations Plan (COP) to BOEM, which BOEM would consider under a separate Section 106 review. Should a developer propose installation of a regional backbone transmission system, they would submit a General Activity Plan (GAP) to BOEM, which BOEM would consider under a separate Section 106 review.

As defined in the Section 106 regulations (36 CFR § 800.16(d)), the Area of Potential Effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The dimensions of the APE are influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. The APE for this undertaking includes the WEAs and potential cable corridors to shore as described below. More specifically, the APE for this undertaking is defined as the depth and breadth of the seabed that could potentially be affected by seafloor/ground-disturbing activities associated with site characterization activities in the WEAs. The APE for site characterization activities includes the discrete horizontal and vertical areas of the seafloor that may be impacted through geotechnical sampling which may include the collection of core samples, soil borings, or other bottom-disturbing techniques that could directly affect historic properties on or below the seafloor, if present. In addition, geotechnical sampling may also require the use of barges or anchored vessels that could also directly affect historic properties, if present.

A map of the WEAs which serve as the discontiguous boundaries of the APE are enclosed and more information regarding the National Environmental Policy Act environmental assessment may be found at https://www.boem.gov/renewable-energy/state-activities/gulf-mexico-activities.

3. Next Steps

If you would like to formally consult on the undertaking, please respond to Mr. Chris Page at Christopher.Page@boem.gov or (504) 736-1742. Correspondence can also be sent to the following address:

Attn: Chris Page
Bureau of Ocean Energy Management
Office of Environment
1201 Elmwood Park Blvd
New Orleans, Louisiana 70123

We respectfully request your response to this invitation ***within 30 days of receipt of this letter***. While you may also request to be a consulting party at a later date, this consultation may advance without your input and your opportunity to fully comment on each step of the process may be affected. If you are requesting consulting party status, please also include the contact information of one representative and one alternate from your organization to receive correspondence and attend meetings, if applicable. We also request that you indicate your preferred correspondence method: via email, hard copy correspondence by mail, or both.

Additionally, in your response, please provide any known information regarding historic properties that may be present within the preliminary APE. This will help inform a Draft Finding of Effect document, which will be developed and distributed by BOEM at a later date. BOEM will then request comments and feedback within 30 days and distribute the Final Finding of Effect.

Sincerely,

James Kendall
Regional Director

Enclosures:
Planning Area Maps

cc:
[redacted]

United States Department of the Interior
BUREAU OF OCEAN ENERGY MANAGEMENT
New Orleans Office
1201 Elmwood Park Blvd
New Orleans, Louisiana 70123-2394

March 29, 2024

[redacted]

The intent of this letter is to continue consultation under Section 106 of the National Historic Preservation Act and solicit your comments as a consulting party on the Bureau of Ocean Energy Management's (BOEM) Draft Finding of No Historic Properties Affected for the undertaking of issuing commercial or research leases within four Gulf of Mexico Wind Energy Areas (WEAs). This undertaking includes the granting rights-of-way (ROWs) and rights-of-use and easement (RUEs) within the region and the execution of associated site characterization activities for a second wind energy lease sale in the Gulf of Mexico (GOMW-2). The Proposed Sale Notice for GOMW-2 that was recently published in the Federal Register (https://www.federalregister.gov/d/2024-05955), proposes sales in WEAs J, K, and I. The enclosed Draft Finding document considers effects associated with WEAs J and K, while WEA I was covered in a previous Section 106 consultation. In addition to WEAs J and K, this Draft Finding document also considers the effects of two other WEAs, L and N, that were included in the BOEM Director's memorandum which is included in the attached document. The intent in including these previously approved WEAs in this Section 106 consultation is to provide flexibility in future lease sales and reduce the consultation burden (i.e. multiple separate consultations) on the parties involved. Therefore, the enclosed Draft Finding document considers the effects of WEAs J, K, L, and N.

BOEM initiated Section 106 consultation on December 21, 2023. Pursuant to 36 CFR § 800.4(d)(l), this letter transmits the Draft Finding for your review (enclosure). This Draft Finding has also been submitted to appropriate State Historic Preservation Offices and Native American tribes that might attach religious and cultural significance to affected historic properties, and other consulting parties. We respectfully request your review and concurrence with this Draft Finding within 30 days of receipt of this letter. Once we have reviewed and addressed the comments received, including any additional consultation, we will post a copy of the Final Finding of Affect on BOEM's website. If you have any questions, concerns, or comments, please contact BOEM's Section 106 lead Scott Sorset at Scott.Sorset@boem.gov or (504) 736-2859.

Sincerely,

James Kendall
Regional Director

Enclosure:
Draft Finding of Affect

Appendix D: Comments on Draft Section 106 Finding of Effect

United States Department of the Interior
BUREAU OF OCEAN ENERGY MANAGEMENT
New Orleans Office
1201 Elmwood Park Blvd
New Orleans, Louisiana 70123-2394

March 29, 2024

Kristin Sanders
State Historic Preservation Officer
Louisiana Office of Cultural Development, Division of Historic Preservation
PO Box 44247
Baton Rouge, LA
70804-4241

Dear Ms. Sanders:

The intent of this letter is to continue consultation under Section 106 of the National Historic Preservation Act and solicit your comments as a consulting party on the Bureau of Ocean Energy Management's (BOEM) Draft Finding of No Historic Properties Affected for the undertaking of issuing commercial or research leases within four Gulf of Mexico Wind Energy Areas (WEAs). This undertaking includes the granting rights-of-way (ROWs) and rights-of-use and easement (RUEs) within the region and the execution of associated site characterization activities for a second wind energy lease sale in the Gulf of Mexico (GOMW-2). The Proposed Sale Notice for GOMW-2 that was recently published in the Federal Register (https://www.federalregister.gov/d/2024-05955), proposes sales in WEAs J, K, and I. The enclosed Draft Finding document considers effects associated with WEAs J and K, while WEA I was covered in a previous Section 106 consultation. In addition to WEAs J and K, this Draft Finding document also considers the effects of two other WEAs, L and N, that were included in the BOEM Director's memorandum which is included in the attached document. The intent in including these previously approved WEAs in this Section 106 consultation is to provide flexibility in future lease sales and reduce the consultation burden (i.e. multiple separate consultations) on the parties involved. Therefore, the enclosed Draft Finding document considers the effects of WEAs J, K, L, and N.

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Sincerely,

James Kendall
Regional Director

Enclosure:
Draft Finding of Affect

No known historic properties will be affected by this undertaking. Therefore, our office has no objection to the implementation of this project. This effect determination could change should new information come to our attention.

Kristin P. Sanders

Kristin P. Sanders
State Historic Preservation Officer
Date 04/19/2024

From: noreply@thc.state.tx.us
To: Page, Christopher M; reviews@thc.state.tx.us
Subject: [EXTERNAL] BOEM Gulf of Mexico Wind 2
Date: Thursday, April 25, 2024 2:58:23 PM

Re: Project Review under Section 106 of the National Historic Preservation Act
THC Tracking #202407950
Date: 04/25/2024
BOEM Gulf of Mexico Wind 2
Gulf of Mexico

Description: Transmittal of the draft finding of effect for the subject project for review and comment.

Dear Christopher Page:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff, led by Marie Archambeault, Amy Borgens, Caitlin Brashear and Tracy Lovingood, has completed its review and has made the following determinations based on the information submitted for review:

Archeology Comments

- No identified underwater archeological sites, historic shipwrecks, and/or significant remote-sensing targets present or affected. However, if buried cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- THC/SHPO concurs with information provided for the underwater project area.

We have the following comments: Regarding above-ground resources, our agency should be

afforded an opportunity to consult under Section 106 on any future Undertaking, should it arise, that includes cable installation and connection to shore-based facilities, installation of site assessment equipment, and/or construction and operation of wind energy facilities.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: marie.archambeault@thc.texas.gov, amy.borgens@thc.texas.gov, caitlin.brashear@thc.texas.gov, tracy.lovingood@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Bradford Patterson
Chief Deputy State Historic Preservation Officer

Please do not respond to this email.

From: Ex Dir at Texas Maritime Museum
To: Page, Christopher M; Sorset, Scott R
Cc: cecilrousseau@gmail.com; tomrodino@att.net
Subject: [EXTERNAL] RE: BOEM Gulf of Mexico Second Wind Energy Sale, Section 106 Draft Finding
Date: Monday, April 1, 2024 12:35:25 PM
Attachments: image001.jpg

Good afternoon.

I have reviewed the draft **Finding of No Historic Properties Affected for the Issuance of Commercial and Research Leases within the Gulf of Mexico Wind Energy Areas J, K, L, and N and Issuance of Right-of-Way and/or Right-of-Use and Easement Grants on the Outer Continental Shelf Offshore Texas and/or Louisiana** and have no comments to offer.

Best regards,

Tom

Capt. Tom Rodino, USCG (Ret.)
Interim Executive Director
M 956-434-9841

Texas Maritime Museum
1202 Navigation Circle
Rockport, TX 78382
executivedirector@texasmaritimemuseum.org
361-729-1271

21a event2

From: Page, Christopher M <Christopher.Page@boem.gov>
Sent: Friday, March 29, 2024 2:18 PM
To: Ex Dir at Texas Maritime Museum <executivedirector@texasmaritimemuseum.org>
Cc: cecilrousseau@gmail.com; Sorset, Scott R <Scott.Sorset@boem.gov>
Subject: BOEM Gulf of Mexico Second Wind Energy Sale, Section 106 Draft Finding

Good afternoon,

Attached is a transmittal letter and draft Section 106 Finding of Effect for your review and comment. If you have any questions, need additional information, or would like to consult on the matter, please let us know.

Best,

Chris

Christopher M. Page
Supervisor, Social Sciences Unit
Office of the Environment, Gulf of Mexico Regional Office
Bureau of Ocean Energy Management
Portland, OR (Remote)
504-736-1742

From: Hughes, Guy D
To: Page, Christopher M
Cc: Williams, Jolene; Hunt, Charles E; Lasell, Rebecca
Subject: Re: BOEM GOMW-2 Wind energy Auction NHPA 106 - APE
Date: Wednesday, February 21, 2024 8:14:04 AM
Attachments: BOEM_GOMW2_NHPA_JELA_reply_02212024.pdf

Chris Page
Bureau of Ocean Energy Management
Office of Environment
1201 Elmwood Park Blvd
New Orleans, LA 70123

Re: Letter to Charles Hunt dated January 30, 2024 (attached) on GOMW-2 wind energy auction NHPA 106 intent and APE

Dear Chris,

Thank you for considering Jean Lafitte National Historical Park and Preserve as a stakeholder in the subject matter.

The proposed wind energy area options and the sum total area of potential affect does not have a nexus to NPS lands and waters under park jurisdiction.

Please reach out if you have additional needs or questions or if the scope and area of potential affect changes in the future.

Sincerely,

Guy Hughes
Chief, Resource Management

From: Hughes, Guy D
Sent: Wednesday, February 21, 2024 10:07 AM
To: Chirstopher_page@boem.gov <Chirstopher_page@boem.gov>
Cc: Williams, Jolene <Jolene_Williams@nps.gov>; Hunt, Charles E <Charles_Hunt@nps.gov>; Lasell, Rebecca <rebecca_lasell@nps.gov>
Subject: BOEM GOMW-2 Wind energy Auction NHPA 106 - APE

Chris Page
Bureau of Ocean Energy Management
Office of Environment

1201 Elmwood Park Blvd
New Orleans, LA 70123

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Sincerely,

Guy Hughes
Chief, Resource Management